

STATE OF ILLIMOIS ENVIRONMENTAL PROTECTION AGENCY DIVISION OF AIR POLLUTION CONTROL 2200 CHURCHILL ROAD SPRINGFIELD, ILLIMOIS 62706

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la. NAME OF OWNER:			13. 1545.	5			
Caterpillar Tra	actor Co.	•	Cate	rpillar 1	HVISION OF	R PLANT (IF D	IFFERENT FROM OWNER):
16. TELEPHONE NUMBER:			2b. STREET	ADDRESS OF E	MISSION SC	URCE:	
815-729-5511 le. STREET ADDRESS OF OWNER	S-		Chan	nahon Rd.			
P.O. Box 504	(:			EMISSION SO	URCE:	21. TELEPH	DNE NUMBER:
ld. CITY:			Jolie		_	815	729-5511
Joliet			2s. COUNTY:				WITHIN CITY LIMITS:
le. STATE:	lf. ZIP CODE	:	Will 2a. TOWNSHI	p.		. YES	X NO
Illinois	60434		Jolie			2h. ZIP CON 60434	
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		PERMIT INFORMAT	TION AND REFERENC	E			
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THE AROVE INFORMATION AS	CHOMATTEC					,	
THE ABOVE INFORMATION IS INFORMATION IS TRUE, CORN PERMIT APPLICATION.	RECT, COMPLETE, AND	ANCE WITH PCB REGS. CURRENT. THE SIGNA	., CHAPTER 2, RUL TURE MUST BE THAT	E 107(b) AS A OF THE PERSO	COPTED APA	RTL 14, 1972, ZED TO EXECUT	AND THE E AN OPERATING
			D SIGNATURE		10.	Mill	<u> </u>
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STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF TAIR POLLUTION CONTROL
PERMIT SECTION
2200 CHURCHILL ROAD
SPRINGFIELD, ILLINOIS 62706

THIS DOCUMENT IS NOT A PERMIT APPLICATION AND IS SOLELY FOR INFORMATIONAL AND STATISTICAL PURPOSES.

217/782-2113

May 20, 1976

CERTIFIED MAIL (53776

CATERPILLAR TRACTOR COMPANY Box 504 Joliet, Illinois 60434

Attention: Mr. Peter P. Donis

Reference

Application No. - 0 3 02 0143

- 197 800 AAC J HTG PLNT - February 25, 1976 I. D. No.

Received

- Joliet Plant Heating Plant Operation of

- Channahon Road Location Joliet, Illinois

County - Will

Gentlemen:

Pursuant to the requirements of the Environmental Protection Act (Act) and the Regulations thereunder the Agency has reviewed the above-referenced permit application and as final action pursuant to Section 39 of the Act hereby denies the permit. The reasons the permit application is denied are below.

The provisions of the PCB Regs., Chapter 2, Rules 102, 303, 307 and 308 may be violated if the permit were granted.

As required by Section 39 of the Act the following is a statement of specific reasons why the Act and the Regulations cited above might not be met.

Rule 102 of Chapter 2: Air Pollution of the Illinois Pollution Control Board's Rules and Regulations provides in pertinent part: "No person shall cause or threaten or allow the discharge or emission of any contaminant into the environment. . . so as, either alone or in combination with contaminants from other sources, to cause or tend to cause air pollution. . . or so as to prevent the attainment or maintenance of any applicable ambient air quality standard."

The application fails to provide sufficient information to prove that the applicant's emission sources either alone or in combination with contaminants from other sources will not violate the nondegradation requirements of Rule 303 of Chapter 2.

The application fails to provide sufficient information to prove that the applicant's emission sources either alone or in combination with contaminants from other sources will not prevent the attainment or maintenance of the applicable ambient air quality standards for particulates and sulfur dioxide set forth in Rules 307 and 308 of Chapter 2.

If we can be of any assistance regarding this or other permit related matters, please contact us.

Very truly yours.

Keith J. Conklin, P.E. Manager, Permit Section Division of Air Pollution Control

DRD:jab

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Joliet, Illinois 60434, 20 phonois of the state of the st

February 25, 1976

Mr. Keith J. Conklin P.E.
Manager Permit Section
Division of Air Pollution Co

Division of Air Pollution Control

200 W. Washington St.

Springfield, Illinois 62706

Subject: Operating Permit Renewal

Application No. ID No.

0 3 02 0143 197 809 AAC

Received

August 11, 1975

Operation of

Joliet Plant Heating Plant Boilers #2 & #3

Location

Channahon Road, Joliet, Illinois

County

Will

Gentlemen:

Enclosed please find two completed copies of our operating permit renewal application for coal fired Boilers #2 and #3 of the Joliet Plant Heating Plant.

If you have any inquiries regarding this permit renewal application, it will be most convenient and expedient if you direct them to:

Caterpillar Tractor Co.

Box 504

Joliet, Illinois 60434

Attention: R. F. Vonachen, Plant Engineer

Phone: 815-729-5210

Davi Free

Very truly yours,

R. F. Vonachen

DB:maa

OPERATING PERMIT RENEWAL APPLICATION

Application No:

0 3 02 0143

ID No.

197 809 AAC

Received:

August 11, 1975

Operation of:

Joliet Plant Heating Plant Boilers #2, #3, #4

Location: Char

Channahon Road, Joliet,

Illinois, Will County

In light of the recent decision in Commonwealth Edison Company v. Pollution Control Board wherein the Illinois Supreme Court affirmed the First District Appellate Court's decision declaring Illinois Rules 203(g)(1) and 204(a)(1) and (c)(1)(A), Chap. 2 of the Pollution Control Board's Rules and Regulations unenforceable, Caterpillar Tractor Co. hereby requests that you please take the necessary steps to issue operating permits for our Joliet Plant's Heating Plant coal fired boiler facility, namely Boiler Nos. 2 & 3 & 4. Coal fired Boilers #2 & #3 are currently referenced to operating permit No. 0 3 02 0143. Dual fuel (coal and gas) Boiler No. 4 is currently referenced to operating permit No. 0 5 08 0224. It should be removed from this permit and incorporated into this application as a dual fuel boiler.

The coal and natural gas information for dual fuel Boiler #4 will be the same as that already incorporated into previous operating permit applications

You should consider this document as a formal resubmission of our operating permit applications, with the exception that any reference in our prior permit applications to any compliance schedule designed to meet the emission limitations of said rules should be disregarded.

No. 0 3 02 0143.

Caterpillar Tractor Co. Date Feb 23 1976

ATT

FEB 25 1976

ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF THE POLLUTION CONTROL

September 10, 1975

CERTIFIED MAIL

153802 CATERPILLAR TRACTOR CO. Box 504

Joliet, Illinois 60434

Attention: Mr. Peter Donis

Reference

Application No. + 0 3 02 0143

I. D. No. • 197 809 AAC HTG PLT

Received

* August 11, 1975 * Joliet Plant Heating Plant Operation of

Location - Channahon Rd. Joliet, Illinois

County • Will

Gentlemen:

Pursuant to the requirements of the Environmental Protection Act (Act) and the Regulations thereunder the Agency has reviewed the above-referenced permit application and as final action pursuant to Section 39 of the Act hereby denies the permit. The reasons the permit application is denied are below.

The provisions of the PCB Regs., Chapter 2, Rules 203(g)(1)(A) and 204(c)(1)(A) may be violated if the permit were granted.

As required by Section 39 of the Act the following is a statement of specific reasons why the Act and the Regulations cited above might not be met.

Rule 103(b)(3) specifies minimum data and information requirements to be contained in an operating permit. As your permit application did not fulfill these requirements, the Agency could not complete its analysis pursuant to the Air Pollution Control Board Regulations.

The Agency requires the following data and information items to complete its analysis:

1. Proof of compliance of Boilers #2 and #3 with Rules 203(g)(1)(A) and 204(c)(1)(A).

If we can be of any assistance regarding this or other permit related matters, please contact us:

Very truly yours,

Keith J. Conklin, P.E. Manager, Permit Section Division of Air Pollution Control

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ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

2200 Churchill Road



Springfield, Illinois 62706

Dr. Richard H. Briceland, Director

APRIL 05, 1975

CATERPILLAR TRACTOR CO BOX 504 JOLIET, IL.

60434

ATTENTION - PETER P DONIS

EFERENCE ...

APPLICATION NO. - 03020143 ID NUMBER - 197809AAC RECEIVED - 01-16-75

4 BOILRS

RECEIVED

OPERATION OF - JOLIET PLANT HEATING PLANT

- CHANNAHON ROAD LOCATION TENEDE TO LONG

JOLIET WILL

GENTLEMEN:

THIS LETTER IS TO ADVISE YOU THAT THE ABOVE-REFERENCED PERMIT APP-LICATION IS DUE TO EXPIRE ON 08-30-75. SINCE THE PCB REGS., CHAPTER 2, PART 1, RULE 103(B)(6) REQUIRE THAT AN APPLICATION FOR A PERMIT RENEWAL BE SUBMITTED TO THE AGENCY AT LEAST 90 DAYS PRIOR TO THE EXPIRATION DATE OF THE PERMIT. THE AGENCY SUGGESTS THAT YOU REAPPLY ON OR BEFORE 06-01-75.

ENCLOSED WITH THIS LETTER IS A REAPPLICATION FORM WHICH MAY BE USED IF THE OPERATION AS DESCRIBED IN THE ABOVE REFERENCED PERMIT APPLICATION REMAINS TRUE, CORRECT, CURRENT AND COMPLETE. IF THE OP-ERATION AS DESCRIBED IN THE ABOVE-REFERENCED PERMIT APPLICATION HAS BEEN MODIFIED AS DEFINED IN PCB REGS. CHAPTER 2. PART 1. RULE 101. YOU SHOULD COMPLETE THE APPROPRIATE PERMIT APPLICATION FORMS.

UPON RECEIPT OF THIS NOTICE YOU SHOULD FURTHER APPRISE YOURSELF OF THE EXPIRATION DATES OF ALL OTHER PERMITS WHICH REQUIRE RENEWAL. SHOULD YOU HAVE ANY QUESTIONS CONCERNING THIS MATTER, PLEASE CONTACT YOUR DIVISION OF AIR POLLUTION CONTROL REGIONAL OFFICE OR THIS OFF-ICE. YOUR REGIONAL OFFICE IS IDENTIFIED ON THE MAP PRINTED ON THE REVERSE-SIDE OF THE 'STANDARD CONDITIONS FOR OPERATING PERMITS' IN-CLUCED WITH YOUR CURRENT PERMIT.

IF YOU HAVE ALREADY REAPPLIED OR IF THIS NOTICE IS INAPPLICABLE, PLEASE DISREGARD IT.

VERY TRULY YOURS,

KEITH J. CONKLIN, P.E. MANAGER, PERMIT SECTION DIVISION OF AIR POLLUTION CONTROL

7175 BER

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

2200 Churchill Road



Springfield, Illinois 62706

Dr. Richard H. Briceland, Director

MARCH 05, 197

PERMIT EXPIRATION DATE 08-30-75

CATERPILLAR TRACTOR CO BOX 504 JOLIET, IL.

ATTENTION - PETER P DONIS

REFERENCE

APPLICATION NO. - 03020143

ID NUMBER - 197809AAC RECEIVED - 01-16-75

4 BOILRS

RECEIVED - 01-16-75
OPERATION OF - JOLIET PLANT HEATING PLANT
LOCATION - CHANNAHON ROAD

JOLIET

WILL

GENTLEMEN:

PERMIT IS HEREBY GRANTED TO OPERATE THE ABOVE-REFERENCED EQUIPMENT.

THIS PERMIT IS SUBJECT TO THE FOLLOWING CONDITIONS:

STANDARD CONDITIONS ATTACHED HERETO AND INCORPORATED HEREIN BY REFERENCE.

VERY TRULY YOURS.

KEITH J. CONKLIN. P.E. MANAGER, PERMIT SECTION DIVISION OF AIR POLLUTION CONTROL

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STATE OF ILLINOIS ENVIRONMENTAL PROTECTION AGENCY DIVISION OF AIR POLLUTION CONTROL 2200 CHURCHILL ROAD SPRINGFIELD, ILLINOIS 62706

APPLICATION FOR A PERMIT (A) CONSTRUCT OPERATE NAME OF EQUIPMENT TO BE CONSTRUCTED OR OPERATED Toliet Plant Heating	FOR AGENCY USE ONLY 1. D. NO. 197809AAC PERMIT NO. 03020143 DATE 8/11/25
1a. NAME OF OWNER: Caterpillar Tractor Co.	2a. NAME OF OPERATOR:
16. STREET ADDRESS OF OWNER: BOX 504	2b. STREET ADDRESS OF OPERATOR:
1c. CITY OF OWNER:	2c. CITY OF OPERATOR:
Jolich School 1d. STATE OF OWNER: 1e. ZIP CODE: III. 60434	2d. STATE OF OPERATOR: 2e. ZIP CODE:
3a. NAME OF CORPORATE DIVISION OR PLANT: Cater Pillar Tractor Co.	3b. STREET ADDRESS OF EMISSION SOURCE: Channa hon Rd.
3c. CITY OF EMISSION SOURCE: 3d. LOCATED WITHIN CITY	3e. TOWNSHIP: 3f. COUNTY: 3g. ZIP CODE: 50134
4. ALL CORRESPONDENCE TO: (NAME OF INDIVIDUAL)	5. TELEPHONE NUMBER FOR AGENCY TO CALL: 815 - 729 - 5111
6. ADDRESS FOR CORRESPONDENCE: (CHECK ONLY ONE) LOWNER: OPERATOR OPERATOR OPERATOR	7. YOUR ID NUMBER FOR THIS APPLICATION: (C)
The second seconds and the second seconds	
8. THE UNDERSIGNED HEREBY MAKES APPLICATION FOR A PERMIT AND CERTIFIES THAT ALL PREVIOUSLY SUBMITTED INFORMATION REFIBY AFFIXING HIS SIGNATURE HERETO HE FURTHER CERTIFIES THAT HE	FIES THAT THE STATEMENTS CONTAINED HEREIN ARE TRUE AND CORRECT, AND ERENCED IN THIS APPLICATION REMAINS TRUE, CORRECT AND CURRENT. S AUTHORIZED TO EXECUTE THIS APPLICATION.
AUTHORIZED SIGNATURE(S):(D)	
ву	BY
SIGNATURE Peter Donis	SIGNATURE DATE
TYPED OR PRINTED NAME OF SIGNER Plant Manage	TYPED OR PRINTED NAME OF SIGNER
TITLE OF SIGNER	TITLE OF SIGNER
(A) THIS FORM IS TO PROVIDE THE AGENCY WITH GENERAL INFORMATION ABOUT ONLY BE USED TO REQUEST ONE TYPE OF PERMIT - CONSTRUCTION OR OF	OUT THE EQUIPMENT TO BE CONSTRUCTED OR OPERATED. THIS FORM MAY PERATION - AND NOT BOTH.
(B) CLEARLY IDENTIFY THE GENERIC NAME OF THE EQUIPMENT TO BE CONSTRUCTED PERMIT WHICH MAY BE ISSUED PURSUANT TO THIS APPLICATION. THIS	NUCTED OR OPERATED. SUCH IDENTIFICATION WILL APPREAR ON THE
(C) PROVIDE A NUMBER IN ITEM 7-ABOVE WHICH YOU WOULD LIKE THE AGENC NUMBER WILL BE REFERENCED IN ALL CORRESPONDENCE, RELATIVE TO THE NOT EXCEED TEN (10) CHARACTERS.	CY TO USE FOR IDENTIFICATION OF YOUR EQUIPMENT. YOUR IDENTIFICATION HIS APPLICATION, FROM THIS AGENCY. YOUR IDENTIFICATION NUMBER MUST
(D) THIS APPLICATION MUST BE SIGNED IN ACCORDANCE WITH PCB REGS., O "ALL APPLICATIONS AND SUPPLEMENTS THERETO SHALL BE SIGNED BY THE CONTROL EQUIPMENT, OR THEIR AUTHORIZED AGENT, AND SHALL BE ACCORDANCE.	HE OWNER AND OPERATOR OF THE EMISSION SOURCE OR AIR POLLUTION
IF THE OWNER OR OPERATOR IS A CORPORATION, SUCH CORPORATION MUS OF THE CORPORATION'S BOARD OF DIRECTORS AUTHORIZING THE PERSONS OPERATION OF THE EQUIPMENT TO BE COVERED BY THE PERMIT.	ST HAVE ON FILE WITH THE AGENCY A CERTIFIED COPY OF A RESOLUTION S SIGNING THIS APPLICATION TO CAUSE OR ALLOW THE CONSTRUCTION OR

100% Recycled Paper

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A CONSTRUCTION SUBMITTED IN O		ONSTRUCTION IN COOK COUN) MUST BE
Land to the second of the seco		L OTHER LOCATIONS MUST B		•	
10. THE APPLICANT S LOCATED AND DIS ESTABLISHMENTS. APPLICATION NUM	HALL SUBMIT A PLOT PLAN TANCES TO THE NEAREST RE IF SUCH A PLOT PLAN AN BER. AGENCY I.D. NO.	AND MAP SHOWING DISTANCES SIDENCES, LODGINGS, NURSI D MAP HAS ALREADY BEEN SL	S TO THE NEAREST BOUNDAR: ING HOMES, HOSPITALS, SCR IBMITTED, INDICATE THE AS APPLICATION NO.	Y OF THE PROPERTY ON HOOLS AND COMMERCIAL SOCIATED AGENCY I.D.	WHICH THE OPERATION IS AND MANUFACTURING NUMBER AND PERMIT
■ EOUIPMENT. AND	SHALL SET FORTH MAYEMEM	OW DIAGRAM DEPICTING ALL M SHALL INCLUDE LABELS FO FLOW RATES FOR (1) ALL PI S AND VENTS. NUMBER OF S	SK CHON THISSION SOURCE)	AIR POLLUTION CONT AND EACH ITEM OF AIR ALL AIR POLLUTION CO DRAWING NUMBER(S)	POLLUTION CONTROL ONTROL EQUIPMENT, (3)
AN EMISSION SOU	RCE OR ITS RELATED AIR PO	OF AIR POLLUTION CONTROL : PERMIT APPLICATION FORM LLUTION CONTROL EQUIPMEN	T IS EXHAUSTED. IF IT I	LL INDICATE THROUGH S EXHAUSTED WITHIN A	WHICH STACK OR VENT BUILDING, SO INDICATE.
	- "	NG PERMIT, AND THE APPLICA ETE FORM APC-210, ENTITA	TES SKIN MAD THE OKNIKI TO	A INCORPORATION B	Y REFERENCE."
14. IF THIS IS AN AF AN AIR CONTAMINA FORM APC-203, EN	PLICATION FOR AN OPERATI NT IN EXCESS OF APPLICAE NTITLED "OPERATION DURING	NG PERMIT, AND THE STARTU BLE STANDARDS, THE APPLIC STARTUP."	P OF ANY EMISSION SOURCE ANT MAY REQUEST PERMISSI	DESCRIBED BY THIS A ON TO EXCEED SUCH ST	PPLICATION PRODUCES ANDARDS BY COMPLETING
15. IF THIS IS AN AF DURING MALFUNCTI COMPLETING FORM	PLICATION FOR AN OPERATI ONS OR BREAKDOWNS PURSUA APC-204, ENTITLED "OPERA	NG PERMIT, AND THE APPLIC NT TO PCB REGS., CHAPTER TION DURING MALFUNCTION A	CANT IS APPLYING FOR PER 2, RULE 105, THE APPLICA AND BREAKDOWN."	MISSION TO OPERATE AN ANT MAY REQUEST SUCH	N EMISSION SOURCE PERMISSION BY
16. IF THIS IS AN AP WITH APPLICABLE	PLICATION FOR AN OPERATION REGULATIONS, THE APPLICATIONS	NG PERMIT AND ALL OR ANY NT SHALL COMPLETE FORM AP	PART OF THE PROCESS MUST C-202, ENTITLED "COMPLIA	BE CONTROLLED OR MO	DIFIED TO COMPLY
17. IF THIS IS AN APPLAN?	PLICATION FOR AN OPERATION	NG PERMIT, DOES THE OPERA	TION COVERED BY THIS APP	LICATION REQUIRE AN	EPISODE ACTION
18. WAS EACH EMISSION GOVERNING THE CONTROL TO SECTION 49(c)	N SOURCE COVERED BY THIS NTROL OF AIR POLLUTION," OF THE ENVIRONMENTAL PRO	APPLICATION, AS OF APRIL ADOPTED BY THE FORMER AI TECTION ACT?	W LAFFOLTON CONTROL BOWK	WITH THE *RULES AND D AND CONTINUED EFFE	REGULATIONS CTIVE PURSUANT
19. IF THIS IS AN APP POLLUTION CONTROL IF "YES," CITE PO				IANCE PETITION FILED	WITH THE ILLINOIS
HAD THE APPLICANT WITH THE APPLICAS POLLUTION CONTROL	ON OR BEFORE APRIL 14, LE LIMITATIONS OF THE "R BOARD AND CONTINUED EFF	DATE OF 1972, COMMENCED CONSTRUCT ULES AND REGULATIONS GOVE ECTIVE PURSUANT TO SECTION EXPLANATION AS EXHIBIT D.	N 49(c) OF THE ENVIRONME	FICATIONS SUFFICIENT POLLUTION," ADOPTED NTAL PROTECTION ACT	TO ACHIEVE COMPLIANCE BY THE FORMER AIR YES NO
					r V
ON THE PLANT OR P	LICATION FOR AN OPERATING R, SULFUR DIOXIDE, CARBON REMISES. THIS ESTIMATE S CES DESCRIBED IN THIS APP CES DESCRIBED IN THIS APP	G PERMIT, THE APPLICANT S N MONOXIDE, OXIDES OF NIT SHALL INCLUDE ALL EMISSIO PLICATION.	HALL SUBMIT AN ESTIMATE ROGEN, AND ORGANIC MATER N SOURCES LOCATED ON THE	OF THE MAXIMUM ONE-H IAL EMITTED FROM ALL APPLICANT'S PREMISE	OUR AMOUNTS OF SOURCES LOCATED S AND NOT JUST
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RGANIC MATERIAL ,		CARBON MONOXIDE			1
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	IN ACRES) OF APPLICANT'S				
 LIST AND IDENTIFY AND STATE THE TOTA 	ALL FORMS, EXHIBITS, AND L NUMBER OF PAGES IN THI	OTHER INFORMATION SUBMITS APPLICATION.	TED AS PART OF THIS APPL	ICATION. PLEASE NUM	BER EVERY PAGE



CATERPILLAR TRACTOR CO.

Joliet, Illinois 60434

August 8, 1975

Mr. Keith J. Conklin P.E. Manager Permit Section Division of Air Pollution Control 200 W. Washington St. Springfield, Illinois

Subject: Operating Permit Renewal

Application No. 0 3 02 0143 ID No. 197 809 AAC Received

1-16-75

Operation of Joliet Plant Heating Plant Location

Channahon Road Joliet, Illinois Will County

Dear Mr. Conklin:

Enclosed find two completed copies of our Operating Permit Renewal Application for gas fired Boilers #1 and #4 of the Joliet Plant Heating Plant.

If you have any inquiries regarding this permit renewal application, it will be most convenient if you direct them to:

Caterpillar Tractor Co. Box 504

Joliet, Illinois 60434

Attention: R. F. Vonachen, Plant Engineer

Phone: 815-729-5210

(815)729-5319 DB:Maa

R. F. Vonachen

ENVIRONMENTAL PROTECTION. ENVIRONMENTAL PROTECTION AGENCY

OPERATING PERMIT RENEWAL APPLICATION

Application No. ID No. Received Operation of

197 809 AAC 1-16-75 Joliet Plant Heating Plant

0 3 02 0143

Location

Channahon Rd. Joliet, Ill. Will County

Caterpillar Tractor Co. hereby applies for a new Operating Permit for natural gas fired Boilers #1 and #4 to operate beyond 8-30-75. It is requested that the information pertaining to Boilers #1 and #4 in operating permit application No. 0 3 02 0143 be removed and incorporated into the new Operating Permit Application by reference. To the best of our knowledge, all previously submitted information pertaining to Boilers #1 and #4 is current true and correct.

Caterpillar Tractor Co. Date August 8, 1975

December 13, 1974

CERTIFIED MAIL

CATERPILLAR TRACTOR COMPANY

Box 504

Joliet, Illinois 60434

Attention: Mr. Peter P. Donis

Reference

Application No. - 0 3 02 0143

I. D. No. 🔾 - 197 809 AAC 4 BOILERS

Received - October 3, 1974

Operation of - Joliet Plant Heating Plant

Location - Channahon Road Joliet, Illinois

County - Will

Gentlemen:

Pursuant to the requirements of the Environmental Protection Act (Act) and the Regulations thereunder the Agency has reviewed the above-referenced permit application and as final action pursuant to Section 39 of the Act hereby denies the permit. The reasons the permit application is denied are below.

The provisions of the PCB Regs., Chapter 2, Rule 203 may be violated if the permit were granted.

As required by Section 39 of the Act the following is a statement of specific reasons why the Act and the Regulations cited above might not be met.

Boiler #4 is subject to a future compliance date for particulate matter emissions pursuant to Rule 203(i)(4). Your application, however, contains neither information proving that your equipment is currently in compliance with the emissions standards and limitations of Rule 293(g)(1)(A), nor a Compliance Program and Project Completion Schedule, as described in Rule 104, sufficient to prove that timely compliance with Rule 203(g)(1)(A) will be achieved. Therefore, pursuant to Rules 103(b)(6)(A) and (E) the permit requested cannot be granted.

December113, 1974

CATERPILLAR TRACTOR CO.

If we can be of further assistance, please contact us.

Very truly yours,

Keith J. Conklin, P.E. Manager, Permit Section Division of Air Pollution Control

RKC:jab

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CATERPILLAR TRACTOR CO.

Joliet, Illinois 60434

December 5, 1974

Mr. Keith J. Conklin P.E. Manager Permit Section Division of Air Pollution Control 200 West Washington St. Springfield, Illinois

Subject: Application No.

ID No.

Received

Location County

0 3 02 0143

197 809 AAC October 3, 1974

Channahon Road, Joliet, Illinois

Will

Dear Sir:

In response to your letter of November 13, 1974 requesting additional information for Boiler No. 4 when coal fired the following information is being returned to you. Two (2) copies of our revised Operating Permit Renewal Application for the Joliet Plant Heating Plant. This should enable you to continue processing our Joliet Heating Plant Operating Permit Renewal Application #0 3 02 0143.

If there are any further inquiries regarding this operating permit application, it would be convenient and most expedient if they were addressed to:

> Caterpillar Tractor Co. P.O. Box 504 Joliet, Illinois 60434

Attention: R. F. Vonachen, Plant Engineer

Phone: 815-729-5210

Very truly yours,

R. F. Vonachen

Plant Engineer

DB:maa (815)729-5319 !

OPERATING PERMIT RENEWAL APPLICATION

Application No. ID No. Received Operation of Location

0 3 02 0143 197 809 AAC Feb. 5, 1973 Boilers #1, #2, #3 & #4 Channahon Road Joliet, Illinois

Will County

Caterpillar Tractor Co. hereby applies for a renewal of our Operating Permit No. 0 3 02 0143 for our Joliet Heating Plant. It is requested that our Compliance Plan (page 93) be revised as follows:

A

Expected Date Activity will be Completed

State date construction or modification of equipment will be completed.

10-1-74

State date applicant will test equipment to demonstrate compliance with environmental protection act and substantive regulations promulgated thereunder

4-1-75

State date equipment will be fully operational:

.;

5-30-75

The coal analysis and resulting emissions for Boilers #2, #3, and #4 should be revised to reflect the Southwestern Illinois Coal currently being used. The analysis of this coal appears on the attached sheet supplied by the Arch Mineral Corp. of St. Louis, Mo.

Dual fuel Boiler No. 4 should be revised to show that it will be operated exclusively on firm contract natural gas after May 30, 1975. After May 30, 1975 Boiler No. 4 will be operated on coal only in the event of a curtailment of our firm contract natural gas and then it will be operated either on low sulphur coal (analysis attached) or on high sulphur coal with a variance from the Illinois Pollution Control Board.

These are the only changes in our operations covered by the above mentioned operating permit since our original application on February 5, 1973. To the best of our knowledge all other previously submitted information is current true and correct.

Plant Manager

Caterpillar Tractor Co. Date 12/5/71

LOW SULPHUR COAL ANALYSIS

P & M Mining Co. Edna Mine Oak Creek, Colorado

	•	Dry
Carbon Hydrogen Nitrogen Chlorine Sulphur Ash Oxygen		70.1% 5.0 1.5 0.0 .8 10.0 12.6 100.0%
ASH ANALYSIS	194	
Phos Pentoxide Silica Ferric Oxide Alumina TiO2 Lime Magnesia Sulphur Trioxide Potassium Oxide Sodium Oxide Undetermined		1.2% 52.8 4.8 31.0 .9 4.3 1.2 2.5 .8 .4 .1 100.0%

FUSION TEMPERATURE OF ASH

FUSION TEMPERATURE OF ASH	Reducing	<u>Oxydizing</u>
Initial Def.	2635	2700
Soft (H=W)	2710	2755
Soft $(H=\frac{1}{2}W)$	2750	2800
Fluid	7.0	and 1000
OTHER DATA		
•	As Received	Dry
Moisture	10.8	
Ash	8.9	10.0
Fixed Carbon	43.5	48.8
Volatile Matter	36.8	41.2
	100.0	100.0
Sulphur	.7	.8
BTU content	10,995	12,325
Grindability	48.1	• •
	•	

Free Swelling Index - Nonaglomerating

SOUTHWESTERN ILLINOIS COAL

COAL ANALYSES

ULTIMATE ANALYSIS	TYPICAL
Moisture Carbon Hydrogen Nitrogen Chlorine Sulfur Ash Oxygen	10.75 61.35 5.83 1.21 .04 3.90 10.67 6.25
Volatile Fixed Carbon BTU (As Rec'd)	33.06 45.52 11,076
ASH ANALYSIS	
Phos. Pentoxide Silica Ferric Oxide Alumina Lime Magnesia Sulfur Trioxide Potassium Oxide Titania Sodium Oxide Undetermined	0.59 45.44 18.28 20.38 7.30 .09 3.88 1.92 1.15 0.55 0.42
Grindability	50
FUSION TEMPERATURE	
Reducing I.D. Soft (H-W) Soft (H-W) Fluid	1980 2105 2170 2260

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	11/21/74 AM
	MR DAVE BECK (ANDERS)
	CATERDILIAN CALLES
	RE 03020143 197809 MAC (JOLIET) 44 BOILER) WE RESECTED HIS PERMIT
- 0 0	BECAUSE OF THE STATEMENT HE MADE ON PAGE 63 OF HIS AD
0 4 8	HIS LAWYER SAID THE STATEMENT SHOULD BE CORRECT
	WE DON'T AGREE (FOR THE REMONISMA CAZE MA BERL 14.3 # 15 815 729 5319
	1/22/74 - He will delete Jangues by letter request
	Jefor 12/6/74

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November 13, 1974

CATERPILLAR TRACTOR COMPANY Box 504 Joliet, Illinois 60434

Attention: Peter P. Donis

Reference

Application No. - 0 3 02 0143 1. D. No. - 197 809 AAC 4 BOILERS

Received - October 3, 1974
Location - Channahon Rodd
Joliet, Illinois

County - Will

Gentlemen:

A review of the above-referenced operating permit application, revealed your failure to disclose pertinent information, which will be necessary for the Agency to determine whether the emission of air contaminants from your operation will comply with the Illinois environmental Protection Act, and the regulations promulgated thereunder.

We request that you send the following information:

The application does not contain a Compliance Program and Project Completion Schedule, or proof that such a plan is not needed for the following emission sources:

Boiler #4 when coal fired

This request for additional information does not affect the date your permit application was filed. Failure to supply the above requested information by December 6, 1974 may require the Agency to refuse to grant the above-referenced application.

Very truly yours,

Keith J. Conklin, P.E. Manager, Permit Section Division of Air Pollution Control

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CATERPILLAR TRACTOR CO.

Joliet, Illinois 60434

October 7, 1974

Mr. Keith J. Conklin, PE Manager Permit Section Division of Air Pollution Control 200 W. Washington St. Springfield, Illinois 62706

Subject: Project Completion Reports Zurn SO2 Scrubber

Dear Mr. Conklin:

Attached are project completion reports for the construction of a SO2 and particulate scrubber at the Joliet Plant Heating Plant on Boilers #2 and #3. It is being submitted to comply with Standard Condition No. 10 of Operating Permit No. 0 3 02 0143.

If there are any inquiries regarding this project completion report, it would be convenient and most expedient if they were directed to:

Caterpillar Tractor Co. P.O. Box 504 Joliet, Illinois 60434

Attention: R. F. Vonachen, Plant Engineer

Phone: 815-729-5210

Very truly yours,

OF Funcilm

R. F. Vonachen

DB:maa

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OCT 15 1974

STATE OF MUNICIPAL ACTION

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STATE OF ILLINOIS ENVIRONMENTAL PROTECTION ASSEMBLY DIVISION OF AIR POLEUTION CONTROL 2200 CHURCHILE ROAD SPRINGFIELD, ILLINOIS 62706

1	·	FOR OFFICIAL USE CALY										
<i>'</i>	,	I. D. NO.										
	PROJECT COMPLETION REPORT	PERMIT NO. 0										
	Heating Plant Boilers No. 2 & 3	DATE										
	1. MANE OF GAMER: Caterpillar Tractor Co.	2. NAME OF CORPORATE DIVISION OR PLANT (IF DIFFERENT FROM GAMER):										
	3. STREET ADDRESS OF EMISSION SOURCE: Channahon Road	4. CIT/: . Joliet										
	S. NAME OF AUTHORIZED PERSON PREPARENG THIS FORM:	6. SIGNATURE: P: F. Virgilia										
	R. F. Vonachen, Plant Engineer 7. YOUR IDENTIFICATION ADMEER: 21 6 27	a ners tute seem openings.										
•	(OPTIONAL) 3A & 3B 9. OPERATING PERMIT NUMBER: 0 3 02 0143	10. CONSTRUCTION PERMIT NUMBER: C 3 02 010										
	(IF AVAILABLE) U 3 UZ U143 .	(IF APPLICABLE)										
9	THIS FORM MUST BE COMPLETED FOR EACH ITEM OF EQUIPMENT TO BE CONSTRUCTED OR MODIFIED IN ACCORDANCE WITH A COMPLIANCE PLAN AS DEFINED IN RULE 164, CHAPTER 2, PART 1 OF THE ILLINOIS POLLUTION CONTROL BOARD RULES AND REGULATIONS											
₹	11. DESCRIBE THE ITEM OF EQUIPMENT BEING CONSTRUCTED OR MODIFIED:											
0 1	Existing coal fired boilers No. 2 & 3 at the Joliet Plant Heating Plant are to be fitted with a sodium hydroxide scrubbing system and chemical regeneration plant to remove SO2 and excess particulate from stack gas. This system is designed by Zurn Air Systems of Birmingham, Alabama.											
	•	·										
Ö												
0	12. IDENTIFY THE LASEL OF THIS ITEM OF EQUIPMENT AS GIVEN ON THE APPLICATION SOZ-Scrubbers Drawli	ABLE PROCESS FLOW ENABRAM ON FILE WITH THE AGENCY:										
	ANSWER QUESTIONS 13 AND 14 IF THIS REPORT IS TIMED IN ACCORDANCE HI											
•.,-	13. IDENTIFY THE LINE IN ITEM 15, APC-98, TO WHICH THIS REPORT APPLIES:											
į,	a. STATE DATE THE APPLICANT HILL ENTER INTO A BINDING AGREEMENT TO PURCHASE OR MODIFY THIS ITEM OF EQUIPMENT.	6. STATE DATE CONSTRUCTION OR MODIFICATION OF EQUIPMENT WILL BE COMPLETED.										
0	b. STATE CATE THE APPLICANT WILL APPLY FOR A CONSTRUCTION PERMIT FOR THIS ITEM OF EQUIPMENT OR MODIFICATION OF EQUIPMENT.	e. STATE CATE APPLICANT WILL TEST EQUIPMENT TO DEMONSTRATE COMPLIANCE WITH THE ENVIRONMENTAL PROTESTION ACT AND SUBSTANTIVE REGULATIONS PROMULGATED THEREUNDER.										
	C. STATE DATE THIS ITEM OF EQUIPMENT WILL BE DELIVERED (IF FRESENT EQUIPMENT IS TO SE MODIFIED, STATE WHEN SUCH MODIFICATION SHALL BEGIN) TO THE APPLICANT'S FACILITY.	f. STATE DATE EQUIPMENT WILL BE FULLY OPERATIONAL.										
	14. ENTER THE APPLICABLE DATES FROM COLUMNS A AND 8, APC-98 AND THE ACT	UAL DATE ON WHICH THE ACTIVITY WAS COMPLETED:										
	Ä. B.	,, c.										
	EXPECTED DATE LATEST DAT ACTIVITY WILL ACTIVITY N BE COMPLETED BE COMPLETED	TEL ACTIVITY WAS										
	ANSWER QUESTION 15 CHLY IF 13 AND 14 IS NOT APPLICABLE.											
	15. DESCRIBE ACTIVITIES CURING PAST SIX MONTHS WHICH WILL LEAD TO COMPL	ETION OF COMPLIANCE PROGRAM AS DESCRIBED ON FORMS APC-95 AND APC-93:										
	SEE EXHIBIT A.											
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EXHIBIT A

During the past six months the Zurn scrubbing units have been built, the chemical processing equipment has been installed and the chemical processing building essentially completed. The system is approximately 95% complete still lacking some automatic control equipment, emission monitoring equipment, lighting and insulation. Recently, the system has been charged with chemicals and shake down and line out operations have started. Assuming no major downtime for redesign the scrubber supplier has indicated that his preliminary stack tests can be started approximately December 1, 1974 and independent stack tests can commence as early as February 1, 1975.



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CATERPILLAR TRACTOR CO.

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Joliet, Illinois 60434

September 27, 1974

Mr. Keith J. Conklin P.E. Manager Permit Section Division of Air Pollution Control 200 W. Washington St. Springfield, Illinois 62706

Subject: Operating Permit Renewal

Operation of - Boilers #1, #2, #3 and #4

Location - Channahon Road Joliet, Illinois

Will County

Dear Mr. Conklin:

Enclosed please find two completed copies of our Operating Permit Renewal Application for the Joliet Heating Plant.

If you have any inquiries regarding this permit renewal application, it will be most convenient if you direct them to:

Caterpillar Tractor Co.

Box 504

Joliet, Illinois 60434

Attention: R. F. Vonachen, Plant Engineer

Phone: 815-729-5210

Very truly yours,

QF Vonackin R. F. Vonachen

DB:maa

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OPERATING PERMIT RENEWAL APPLICATION

Application No. ID No. Received Operation of

197 809 AAC Feb. 5, 1973 Boilers #1, #2 #3 and #4

0 3 02 0143

Location

Channahon Road Joliet, Illino Will County

Caterpillar Tractor Co. hereby applies for a renewal of our Operating Permit No. 0 3 02 0143 for our Joliet Heating Plant. It is requested that our Compliance Plan (page 93) be revised as follows:

> Expected Date Activity will be Completed

State date construction or modification of equipment will be completed.

10-1-74

State date applicant will test equipment

4-1-75

to demonstrate compliance with environmental protection act and substantive regulations promulgated thereunder

State date equipment will be fully operational

5-30-75

The coal analysis and resulting emissions for Boilers #2, 3, and 4 should be revised to reflect the Southwestern Illinois Coal currently being used. The analysis of this coal appears on the attached sheet supplied by the Arch Mineral Corp. of St. Louis, Mo.

Dual fuel Boiler No. 4 should be revised to show that it will be operated exclusively on firm contract natural gas after May 30, 1975. After May 30, 1975, Boiler No. 4 will be operated on coal only in the event of a curtailment of our firm natural gas contract.

These are the only changes in our operations covered by the above mentioned operating permit since our original application on February 5, 1973. To the best of our knowledge all other previously submitted information is current true and correct.

Caterpillar Tractor Co.

Date

Plant Manager

The above signature authorized by a resolution of the Caterpillar Tractor Co. Board of Directors dated October 13, 1972 is already on file with your office.

13.



SOUTHWESTERN ILLINOIS COAL

COAL ANALYSES

ULTIMATE ANALYSIS .	TYPICAL
Moisture Carbon Hydrogen Nitrogen Chlorine Sulfur	10.75 61.35 5.83 1.21 .04 3.90
Ash Oxygen	10.67 6.25
Volatile Fixed Carbon BTU (As Rec'd)	33.06 45.52 11,076
ASH ANALYSIS	
Phos. Pentoxide Silica Ferric Oxide Alumina Lime Magnesia Sulfur Trioxide Potassium Oxide Titania Sodium Oxide Undetermined	0.59 45.44 18.28 20.38 7.30 .09 3.88 1.92 1.15 0.55 0.42
Grindability	. 50
FUSION TEMPERATURE	
Reducing I.D. Soft (H-W) Soft (H-W) Fluid	1980 2105 2170 2260

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CATERPILLAR TRACTOR CO.

Joliet, Illinois 60434

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Mr. Keith J. Conklin P.E. Manager Permit Section Division of Air Pollution Control 200 W. Washington St. Springfield, Illinois 62706

Subject: Project Completion Reports Zurn SO₂ Scrubber

Dear Mr. Conklin:

February 5, 1974

Attached are project completion reports for the construction of an SO_2 and particulate scrubber at the Joliet Plant Heating Plant on Boilers #2 and #3. It is being submitted to comply with Standard Condition No. 10 of Operating Permit No. 0 3 02 0143.

If there are any inquiries regarding this Project Completion Report, it would be convenient and most expedient if they were directed to:

Caterpillar Tractor Co.
P. O. Box 504
Joliet, Illinois 60434
Attention: R. F. Vonachen, Plant Engineer
Phone: 815-729-5210

Very truly yours,

RF Vinailin

R. F. Vonachen

DB:maa

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STATE OF ILLINOIS ENVIRONMENTAL PROTECTION AGENCY DIVISION OF AIR POLLUTION CONTROL 2200 CHURCHILL ROAD SPRINGFIELD, ILLINOIS 62706

f	
	FOR OFFICIAL USE ONLY
PROJECT COMPLETION REPORT	
Heating Plant Boilers No. 2 & 3	PERMIT NO. 0
1. NAME OF OWNER: Caterpillar Tractor Co.	2. NAME OF CORPORATE DIVISION OR PLANT (IF DIFFERENT FROM GWNER):
3. STREET ADDRESS OF EMISSION SOURCE: Channahon Road	4. CITY: Joliet
5. MAME OF AUTHORIZED PERSON PREPARING THIS FORM: R. F. Vonachen, Plant Engineer	6. SIGNATURE: Bebert F. Veraslen
7. YOUR IDENTIFICATION NUMBER: 3A & 3B	8. DATE THIS FORM PREPARED: February 4, 1974
9. OPERATING PERMIT NUMBER: 0 3 02 0143	10. CONSTRUCTION PERMIT NUMBER: C3 02 010
	C 3 02 138
THIS FORM MUST BE COMPLETED FOR EACH ITEM O IN ACCORDANCE WITH A AS DEFINED IN RULE 104, C ILLINOIS POLLUTION CONTROL BE	A COMPLIANCE PLAN
11. DESCRIBE THE ITEM OF EQUIPMENT BEING CONSTRUCTED OR MODIFIED: EX	isting Coal Fired Boilers No. 2 & 3 at the
Joliet Plant Heating Plant are to be fit	ted with a sodium hydroxide scrubbing o remove SO2 and excess particulate from
stack gas. This system is designed by Z	urn Air Systems of Birmingham, Alabama
	•
12. IDENTIFY THE LABEL OF THIS ITEM OF EQUIPMENT AS GIVEN ON THE APPLICATION OF THE APPLI	ABLE PROCESS FLOW DIAGRAM ON FILE WITH THE AGENCY:
ANSWER QUESTIONS 13 AND 14 IF THIS REPORT IS TIMED IN ACCORDANCE WI	
13. IDENTIFY THE LINE IN ITEM 15, APC-98, TO WHICH THIS REPORT APPLIES:	
a. STATE DATE THE APPLICANT WILL ENTER INTO A BINDING AGREEMENT TO PURCHASE OR MODIFY THIS ITEM OF EQUIPMENT.	d. STATE DATE CONSTRUCTION OR MODIFICATION OF EQUIPMENT WILL BE COMPLETED.
b. STATE DATE THE APPLICANT WILL APPLY FOR A CONSTRUCTION PERMIT FOR THIS ITEM OF EQUIPMENT OR MODIFICATION OF EQUIPMENT.	e. STATE DATE APPLICANT WILL TEST EQUIPMENT TO DEMONSTRATE COMPLIANCE WITH THE ENVIRONMENTAL PROTECTION ACT AND SUBSTANTIVE REGULATIONS PROMULGATED THEREUNDER.
c. STATE DATE THIS ITEM OF EQUIPMENT WILL BE DELIVERED (IF PRESENT EQUIPMENT IS TO BE MODIFIED, STATE WHEN SUCH MODIFICATION SHALL BEGIN) TO THE APPLICANT'S FACILITY.	f. STATE DATE EQUIPMENT WILL BE FULLY OPERATIONAL.
14. ENTER THE APPLICABLE DATES FROM COLUMNS A AND B, APC-98 AND THE ACTU	IAL DATE ON WHICH THE ACTIVITY WAS COMPLETED:
Α. β.	
A. B. EXPECTED DATE LATEST DATE	C. ACTUAL DATE
ACTIVITY WILL ACTIVITY WI BE COMPLETED BE COMPLETE	TEL ACTIVITY WAS
ANSWER QUESTION 15 ONLY IF 13 AND 14 IS NOT APPLICABLE.	
 DESCRIBE ACTIVITIES DURING PAST SIX MONTHS WHICH WILL LEAD TO COMPLE 	TION OF COMPLIANCE PROGRAM AS DESCRIBED ON FORMS APC-95 AND APC-98:
See Exhibit A	

EXHIBIT A

During the past 6 months since the start of construction concrete footings for the chemical processing building have been completed. The concrete footings for the scrubbers and pipe truss are presently under construction. Foundations for equipment to be placed in the chemical processing building are under construction and should be completed within 30 days. It is anticipated that equipment will be installed starting April 1974 with completion scheduled for October 1974 so that Boilers No. 2 & 3 will be operational for the 1974 heating season at which time shakedown and testing will commence.

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CATERPILLAR TRACTOR CO.

Joliet, Illinois 60434

January 21, 1974

THE OF ILLINOIS

Mr. Keith J. Conklin P.E.
Manager Permit Section
EPA Division of Air Pollution Control
200 W. Washington St.
Springfield, Illinois 62706

Subject: Project Completion Report

Boiler #4 Dual Fuel Conversion

Dear Mr. Conklin:

The final interim Project Completion Report for Boiler #4 at the Joliet Plant Heating Plant is attached. Boiler #4 is now capable of burning either coal and natural gas alone or any combination thereof successfully. However, it is our intention to continue to operate Boiler #4 on Illinois coal during the winter heating season until May 30, 1975 to conserve natural gas in line with Federal Energy Office requests. Additional details regarding this operating intention are available in the attached Project Completion Report. This report is being submitted to comply with Standard Condition No. 10 of Operating Permit No. 0 3 02 0143.

If there are any inquiries regarding this Project Completion Report, it would be convenient and most expedient if they were directed to:

Caterpillar Tractor Co. P. O. Box 504

Joliet, Illinois 60434

Attn: R. F. Vonachen, Plant Engineer

Phone: 815-729-5210

Very truly yours,

Fronach

R. F. Vonachen

DB:maa

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STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
2200 CHURCHILL ROAD
SPRINGFIELD, ILLINOIS 62706
ENVIRONMENTAL PROTECTION AGENCY

	> 1	# ** *	EOD OFF	ICIAL USE ONLY
	·		I. D. NO.	ICIAE 025 OULY
	PROJECT COMPLETION REPORT	•	1. U. NU.	
i	Gas Conversion		PERMIT NO.	0
	Joliet Plant Heating Plant Boiler No. 4	•	DATE	
	1. NAME OF OWNER: Caterpillar Tractor Co.	2. NAME	OF CORPORATE DIVISION OR PL	ANT (IF DIFFERENT FROM OWNER):
	3. STREET ADDRESS OF EMISSION SOURCE: Channahon Road	4. CITY	Joliet	
	5. NAME OF AUTHORIZED PERSON PREPARING THIS FORM:	6. SIGN		
	R. F. Vonachen Plant Engineer 7. YOUR IDENTIFICATION NUMBER:		AF Voneso	Live
	(OPTIONAL) 3C	8. DATE	THIS FORM PREPARED: /- 2	21-74
	9. OPERATING PERMIT NUMBER: 0 3 02 0143	10. CONS	TRUCTION PERMIT NUMBER:	F 3 02 004
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ហ	THIS FORM MUST BE COMPLETED FOR EACH ITEM O IN ACCORDANCE WITH	A COMPLIAN	CF PLAN	IED
~	AS DEFINED IN RULE 104, C ILLINOIS POLLUTION CONTROL B	CHAPTER 2, BOARD RULES	PART 1 OF THE AND REGULATIONS	
N				
	11. DESCRIBE THE ITEM OF EQUIPMENT BEING CONSTRUCTED OR MODIFIED:	1.1	ut ni t	1
0	Existing coal fired boiler No. 4 at the Jo natural gas in stages according to availabl	TIEL HE	ating Plant is to	be converted to
C	for conversion of 2/3 boiler capacity to na	tural	ear gas commicment	o take advantage of
	a 20,000 therm commitment. The boiler will	be op	erated as a combi-	nation fuel source
	until enough natural gas is available by 19	75 to	operate it comple	telv on natural gas
_	or with natural gas and low sulfur coal wit	h an a	dditional scrubbe	r if necessary.
		•		
, 200. 				
	12. IDENTIFY THE LABEL OF THIS ITEM OF EQUIPMENT AS GIVEN ON THE APPLIC Gas Conversion Drawing No. 13	ABLE PROCE	S FLOW DIAGRAM ON FILE WITH	THE AGENCY:
1	ANSWER QUESTIONS 13 AND 14 IF THIS REPORT IS TIMED IN ACCORDANCE WI	TH A DATE	SPECIFIED ON THE PROJECT COM	PLETION SCHEDULE (APC98)
4	13. IDENTIFY THE LINE IN ITEM 15, APC-98, TO WHICH THIS REPORT APPLIES:			THE STATE OF THE S
d	a. STATE DATE THE APPLICANT WILL ENTER INTO A BINDING AGREEMENT TO PURCHASE OR MODIFY THIS ITEM OF EQUIPMENT.	. [d. STATE DATE CONSTRUCTION BE COMPLETED.	N OR MODIFICATION OF EQUIPMENT WILL
	b. STATE DATE THE APPLICANT WILL APPLY FOR A CONSTRUCTION PERMIT FOR THIS ITEM OF EQUIPMENT OR MODIFICATION OF EQUIPMENT.		COMPLIANCE WITH THE ENV	ILL TEST EQUIPMENT TO DEMONSTRATE /IROMMENTAL PROTECTION ACT AND S PROMULGATED THEREUNDER.
	C. STATE DATE THIS ITEM OF EQUIPMENT WILL BE DELIVERED (IF PRESENT	. 13	f. STATE DATE EQUIPMENT W	j
	EQUIPMENT IS TO BE MODIFIED, STATE WHEN SUCH MODIFICATION SHALL BEGIN) TO THE APPLICANT'S FACILITY.	. لذ	1.1. STATE DATE EGOTIVEHT N	THE BE FULLY OPERATIONAL.
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	14. ENTER THE APPLICABLE DATES FROM COLUMNS A AND 8, APC-98 AND THE ACTU	UAL DATE OF	HICH THE ACTIVITY WAS COMP	PLETED:
	A. 2/3 compliance 8. f	ull co	mpliance ·	c. 2/3 compliance
	#W70770 P.1-1			capability
	ACTIVITY WILL BE COMPLETED 7-1-73 EATEST DATI ACTIVITY WILL BE COMPLETED	ILL _		ACTUAL DATE ACTIVITY WAS 1-2-74
,	ANSWER QUESTION 15 ONLY IF 13 AND 14 IS NOT APPLICABLE.			
1	15. BESCRIBE ACTIVITIES DURING PAST SIX MONTHS WHICH WILL LEAD TO COMPLE	ETION OF CO	HPLIANCE PROGRAM AS DESCRIBE	O ON FORMS APC-95 AND APC-98:
	See Exhibit A next page.			
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EXHIBIT A

As of January 2, 1974 the construction of the dual fuel (coal and natural gas) conversion of Boiler #4 was completed. The boiler is now capable of running on either natural gas or coal alone or on any simultaneous combination of each fuel. The use of natural gas in dual fuel Boiler #4 is presently limited to 2/3 of its operating capacity when natural gas fired Boiler #1 is operating at capacity so as not to exceed the firm daily natural gas contract demand from Northern Illinois Gas Co.

Caterpillar Tractor Co. intends to continue burning Illinois Coal only in Boiler #4 during the regular winter heating season to conserve natural gas in line with Federal Energy Office requests until May 30, 1975. After May 30, 1975 it is intended to operate dual fuel Boiler #4 either completely on natural gas or with natural gas and low sulphur coal with an additional scrubber as necessary in total compliance with the above compliance plan. Between now and May 30, 1975 when it is necessary to operate Boiler #4 in periods other than during the winter heating season, it is our intention to use natural gas within the limits of our firm gas contract demand to reduce particulate and $\$0_2$ emissions as much as possible.

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CATERPILLAR TRACTOR COMPANY

Box 504

Joliet, Illinois

60434

Attention: Mr. Peter P. Donis - Plant Manager

Reference

Application No. - 0 3 02 0143 I. D. No. - 197 809 AAC

Received - February 5, 1973
Operation of - Boilers #2, #3 and #4

Location - Chammahon Road

Joliet, Illinois

Will County

Gentlemen:

Permit is hereby granted to operate the above-referenced equipment.

This permit is subject to the following conditions:

- 1. Standard conditions attached hereto and incorporated herein by reference.
- 2. The following special conditions:
 - a. Operation is allowed during startup.
 - b. Operation of the following equipment or systems is allowed during malfunction or breakdown.
 - 1. Boilers #2, #3 and #4.

Very truly yours,

Keith J. Conklin, P.E. Manager, Permit Section Division of Air Pollution Control

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OPERATING PERMIT RENEWAL APPLICATION

Application No. ID No. Received Operation of Location

0 3 02 0143 197 809 AAC Feb. 5, 1973 Boilers #1, #2, #3, a Channahon Road

Joliet, Illinois Will County

Caterpillar Tractor Co. hereby applies for a renwal of our Operating Permit No. 0 3 02 0143 for our Joliet Heating Plant. It is requested that our Compliance Plan (page 93) be revised as follows:

A
Expected Date
Activity will be
Completed

State date construction or modification of equipment will be completed

10-1-74

State date applicant will test equipment

4-1-75

to demonstrate compliance with environmental protection act and substantive regulations promulgated thereunder

State date equipment will be fully operational

5-30-75

The coal analysis and resulting emissions for Boilers #2, #3, and #4 should be revised to reflect the Southwestern Illinois Coal currently being used. The analysis of this coal appears on the attached sheet supplied by the Arch Mineral Corp. of St. Louis, Mo.

Dual fuel boiler No. 4 should be revised to show that it will be operated exclusively on firm contract natural gas after May 30, 1975.

These are the only changes in our operations covered by the above mentioned operating permit since our original application on February 5, 1973. To the best of our knowledge all other previously submitted information is current true and correct.

Caterpillar Tractor Co.

Date

By Plant Manager

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SOUTHWESTERN ILLINOIS COAL

COAL ANALYSES

ULTIMATE ANALYSIS	TYPICAL
Moisture Carbon Hydrogen Nitrogen Chlorine Sulfur Ash Oxygen	10.75 61.35 5.83 1.21 .04 3.90 10.67 6.25
Volatile Fixed Carbon BTU (As Rec'd)	33.06 45.52 11,076
ASH ANALYSIS	
Phos. Pentoxide Silica Ferric Oxide Alumina Lime Magnesia Sulfur Trioxide Potassium Oxide Titania Sodium Oxide Undetermined	0.59 45.44 18.28 20.38 7.30 .09 3.88 1.92 1.15 0.55 0.42
Grindability	. 50
FUSION TEMPERATURE	
Reducing I.D. Soft (H-W) Soft (H-½W) Fluid	1980 2105 2170 2260



CATERPILLAR TRACTOR CO.

Joliet, Illinois 60434

January 31, 1973

Mr. Keith J. Conklin P.E. Manager Permit Section Division of Air Pollution Control 2200 Churchill Road Springfield, Illinois 62706

Permit Application of Caterpillar Tractor Co. Joliet Plant Incinerators

Dear Mr. Conklin:

Enclosed please find two completed copies of our Operating Permit application for the Joliet Plant Heating Plant. Also included are two copies each of:

- (2) Compliance Plans
- (3) Construction Permit Applications

detailing installation plans for two SO2 and Particulate scrubbers and one natural gas boiler conversion.

A copy of the resolution of our Board of Directors authorizing our Vice-Presidents and Plant Managers to sign all permit applications and compliance plans was submitted to your agency in October 1972.

If you have any inquiries regarding this permit application, it will be convenient if you direct them to:

Caterpillar Tractor Co. P.O. Box 504 Joliet, Illinois 60434 Attn: R. F. Vonachen, Plant Engineer

Very truly yours,

DF Vorarken

R. F. Vonachen

Plant Engineer

(815) 729-5210 DB:maa

Attach

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STATE OF ILLINOIS ENVIRONMENTAL PROTECTION AGENCY DIVISION OF AIR POLLUTION CONTROL 2200 CHURCHILL ROAD SPRINGFIELD, ILLINOIS 62706

RICHARD B. OGILVIE, GOVERNOR
WILLIAM L. BLASER, DIRECTOR

	I.D. NO. 797809AAC
OPERATING PERMIT APPLICATION	PERMIT NO. 0 3020/43
Joliet Plant Heating Plant	DATE 02-25-76
la. NAME OF OWNER: Caterpillar Tractor Co.	1b. NAME OF OPERATOR:
2a. TELEPHONE NUMBER OF OWNER:	Caterpillar Tractor Co. 2b. TELEPHONE NUMBER OF OPERATOR:
815-729-5511	815-729-5511
3a. STREET ADDRESS OF OWNER:	3b. STREET ADDRESS OF OPERATOR:
Box 504 4a. CITY OF OWNER:	Box 504
Joliet	4b. CITY OF OPERATOR:
•	Joliet
5a. STATE OF OWNER: 6a. ZIP CODE: 60434	5b. STATE OF OPERATOR: 6b. ZIP CODE:
7. NAME OF CORPORATE DIVISION OR PLANT (IF DIFFERENT FROM OWNER):	Illinois 60434
TELEPHONE NO. OF DIV. OR PLANT: 9. LOCATED WITHIN CITY LIMITS:	10. STREET ADDRESS OF EMISSION SOURCE:
815-729-5511 PES 138.NO	Channahon Road
TA. CITY: ITa. TOWNSHIP: Joliet Joliet	12. COUNTY: 13. ZIP CODE:
Joliet Joliet	Will 60434
OWNER (IF INDIVIDUAL) SIGNATURE DATE THE PLAT YOUR IDENTIFICATION NUMBER (OPTIONAL) OPERATOR M OPERATOR (IF INDIVIDUAL)	OWNER (IF CORPORATION OR PARTNERSHIP) Caterpillar Tractor Co. 2-1-73 EXACT CORPORATE OR PARTNERSHIP NAME DATE BY SIGNATURE TITLE PETER P. DONI'S OPERATOR (IF CORPORATION OR PARTNERSHIP)
The above signature authorized by a resolut Directors dated October 13, 1972 is already	on file with your office.
IF AN OWNER OR OPERATOR IS A CORPORATION, IT MUST HAVE ON FILE WITH TH AUTHORIZING THE INDIVIDUALS SIGNING THE APPLICATION TO EXECUTE THIS OP MODIFICATION AND OPERATION OF THE EQUIPMENT TO BE COVERED BY THE PERMI	

APC-60, I copy, 5 pages . APC-96, 6 copies, 1 page each APC-62, 3 copies, 3 pages each APC-95, 2 copies, 2 pages each APC-62, 1 copy, 5 pages APC-61, 2 copies, 6 pages each APC-64, 2 copies, 4 pages each APC-103, 1 copy, 5 pages APC-86, 4 copies, 4 pages each APC-85, 1 copy, 3 pages each APC-103, 1 copy, 2 pages APC-93, 1 copy, 1 page APC-62, 1 copy, 3 pages each APC-94, 1 copy, 11 pages APC-98, 2 copies, 1 page each Addendum A, 1 copy, 1 page, 802 Scrubbing system Flow diagrams, 1 copy, 12 pages, SO2 Scrubbing system &

THIS PERMIT APPLICATION CONSISTS OF APPLICATION FORMS AND OTHER EXHIBITS LISTED BY TITLE AND NUMBER OF PAGES BELOW.

Page 2 of 3

· GENERAL INFORMATION

14.	The applicant shall submit a plot plan and map showing distances to the nearest boundary of the property on which the operation is located and distances to the nearest residences, lodgings, nursing homes, hospitals, schools and commercial and manufacturing establishments, and attach this plot plan and map to this application.
15.	The applicant shall submit a process flow diagram depicting all emission sources and all air pollution control equipment covered by this Uperating Permit application. The diagram shall include labels for each source and equipment, and shall set forth maximum flow rates for (1) all processing equipment, (2) all air pollution control equipment, (3) all emission sources and (4) all stacks and vents.
a a service .	Number of sheets: 6 Drawing number(s): 10, 11, 12, 13, 14, 15
16.	If the applicant is incorporating by reference previously granted Installation or Construction Permits, he shall complete Form APC-93, entitled "Previously Granted Installation or Construction Permits Incorporated by Reference."
a a recommendation of the comment	Total number of Forms APC-93 included with this application:
17.	For each existing emission source (other than fuel combustion sources or incinerators) not covered by a previously granted Installation or Construction Permit, the applicant shall complete Form APC-64, entitled "Data and Information for an Existing Emission Source."
and the second	Total number of Forms APC-64 included with this application:2
18.	For each existing fuel combustion source <u>not</u> covered by a previously granted Installation or Construction Permit, the applicant shall complete Form APC-86, entitled "Data and Information for Existing Combustion Equipment and Indirect Heating."
•	Total number of Forms APC-86 included with this application: 4
19.	For each existing incinerator not covered by a previously granted Installation or Construction Permit, the applicant shall complete form \overline{APC} -92, entitled "Data and Information for Existing Incinerators."
	Total number of Forms APC-92 included with this application: None
20.	For each existing item of air pollution control equipment not covered by a previously granted Installation or Construction Permit, the applicant shall complete Form APC-62, entitled "Data and Information for Existing Air Pollution Control Equipment" (for Electrostatic Precipitators use Form APC-90, entitled "Data and Information for Existing Electrostatic Precipitators").
	Total number of Forms APC-62 included with this application:
•	Total number of Forms APC-90 included with this application:
21.	If the startup of any emission source covered by this application produces contaminants which exceed the applicable emission standards, the applicant shall complete Section "A" of Form APC-94, entitled "Operation During Malfunctions, Breakdowns, or Startups."
٠	Total number of Forms APC-94 included with this application: 1
22.	If the applicant is applying for permission to operate any emission source during malfunctions or breakdowns pursuant to Chapter 2, Rule 105, he shall complete Section "B" of Form APC-94, entitled "Operation During malfunctions, Breakdowns, or Startups."
	Total number of Forms APC-94 included with this application: $\underline{}$
23.	If all or any part of the manufacturing process which is the subject of this Operating Permit application must be controlled or otherwise modified to comply with applicable substantive Regulations, the applicant shall complete Form APC-95, entitled "Compliance Plan" (2) Compliance Plans submitted.
24.	Does the operation covered by this application require an Episode Action Plan? 🔯 YES 🔲 NO
	If "Yes", give the date such plan was filed with the Agency (if it has not been filed, the applicant shall complete Form APC-100, entitled "Episode Action Plan").
	Date Plan submitted: 2-19-71
25.	State whether each of the applicant's emission sources covered by this application was, as of April 14, 1972, operating within the applicable limitations of the "Rules and Regulations Governing the Control of Air Pollution," adopted by the former Air Pollution Control Board and continued effective pursuant to Section 49(c) of the Environmental Protection Act.
	For each such emission source in compliance as of April 14, 1972, state the basis for your conclusions and attach your statements as Exhibit B.

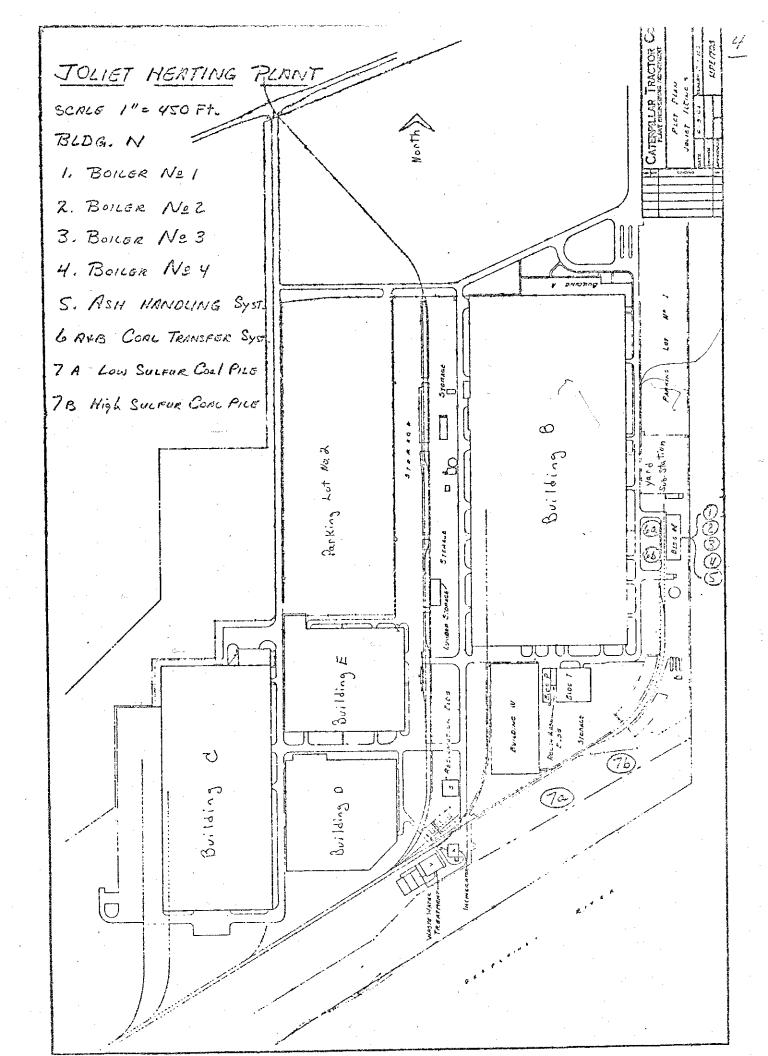
To the best of our knowledge, these sources are in compliance with the former rules & regulations.

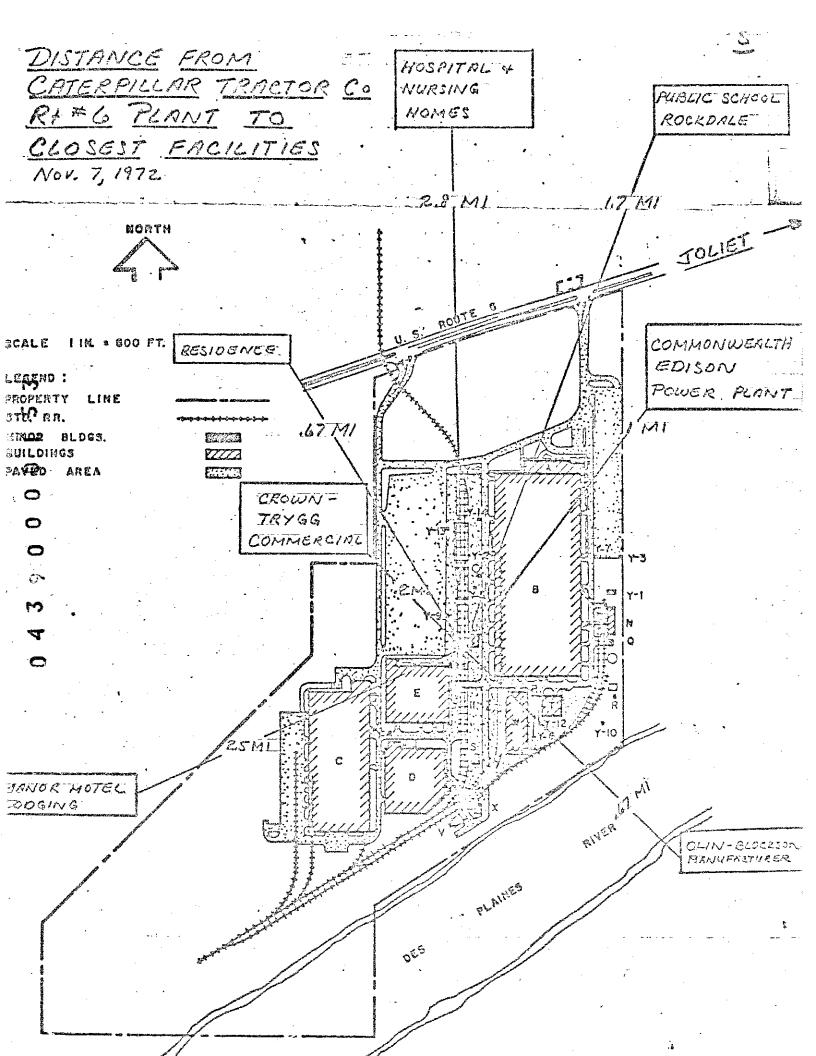
APC-60

	For each such emission source not in compliance as of April 14, 1972, state the basis for your conclusions and attach your statements as Exhibit C.
	Total number of pages in Exhibit B: <u>None</u>
	Total number of pages in Exhibit C: None
26.	Was the applicant's operation the subject of a variance petition filed with the Illinois Pollution Control Board on or before June 13, 1972? \square Yes \square No
	If "Yes", cite PCB number(s): Date of Board Order:
٠.	State whether the applicant had, on or before April 14, 1972, commenced construction of equipment or modifications sufficient to achieve compliance with the applicable limitations of the "Rules and Regulations Governing the Control of Air Pollution," adopted by the former Air Pollution Control Board and continued effective pursuant to Section 49(c) of the Environmental Protection Act.
	☐ Yes ☐ No
	If "No", explain in detail and attach your explanation as Exhibit D.
	Total number of pages in Exhibit D:

0

0







STATE OF ILLINOIS ENVIRONMENTAL PROTECTION AGENCY DIVISION OF AIR POLLUTION CONTROL 2200 CHURCHILL ROAD -SPRINGFIELD, ILLINOIS 62706

RICHARD B. OGILVIE, GOVERNOR

20				WILL	IAM L. BLASER, DIRECTOR
		and a second	FOR OFF	ICIAL USE ONL	Y
PREVIOUSLY CRANTED INS OR	TALLATION		1.D. NO.		
CONSTRUCTIONS PERMITS IN 8Y REFERENCE	CORPORATED		PERMIT NO.	٥ [
		# 118 N	DATE E OF CORPORATE DIVISION OR P		
1. NAME OF OWNER: Caterpillar Tractor Co.			Caterpillar Tract	or Co. Jo	oliet Plant
3. STREET ADDRESS OF EMISSION SOURCE: Box 504 (Channahon Road)		4. CIT	Y: Joliet	•	
5. DATE FORM APC-93 PREPARED: November 14, 1972					
November 17, 1772					
PERMIT NUMBER	ARÊ THE DATA AND PREVIOUSLY SUBMI CORRECT, AND CUR	TTED TRUE,	HAVE ALL CONDITION PERMIT BEEN COMPL	ONS OF THE .IED WITH?**	YOUR IDENTIFICATION (OPTIONAL)
*			ese.		
Application #F 2 06 008 I.D. #197 045 AAF	X YES	MO NO	X YES	☐ NO [
	☐ YES	 ☐ №0	T YES		
CE 72 013		· ·			
→TD #295900	X YES		▼ YES	[] NO [
3	YES	140	YES	NO [
3	YES	NO	YFS	NO [
5	TYES	OH [YES	☐ NO [
·	YES	HO	YES	NO [
9	YES	00 סא	YES	□ NO [
	YES	OM	YES	□ NO [
<u> </u>	YES	□ но	YES	NO [
	YES	□ но	YES	NO [
	YES	NO	YES	NO [
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	YES .	NO	YES	NO	
	YES	NO	[] YES	☐ NO [
	YES	NO	YES	I NO [
	YES	☐ µ0	☐ YES	NO	
	_	_			
	YES	MC	☐ YES	NO	
	YES .	<u></u>	YES	NO [
	YES	∏ ùo	YES	□ NO [

TOTAL NUMBER OF PAGES IN EXHIBIT A:_____

^{* 15 &}quot;NO" COMPLETE CONSTRUCTION PERMIT APPLICATIONS AS APPLICABLE.

^{**} IF "NO" EXPLAIN IN DETAIL AND MARK EXPLANATION AS EXHIBIT A.



STATE OF ILLINOIS ENVIRONMENTAL PROTECTION AGENCY DIVISION OF AIR POLLUTION CONTROL 2290 CHURCHILL ROAD SPRINGFIELD, ILLINOIS 62706

RICHARD B. OGILVIE, GOVERNOR WILLIAM L. BLASER, DIRECTOR

	ID INFORMATION OMBUSTION EQUIPMENT AND		FOR	OFFICIAL USE ONLY									
INDIR	ECT HEATING	:	PERMIT NO.	F									
Joliet Plant Heating Pl	ant Boiler No. 1, MJ13	11	DATE										
la. NAME OF OWNER: Caterpillar Tractor Co		16. NAME OF OF Cat	erator: erpillar Tract	or Co.									
2a. STREET ADDRESS OF OWNER: Box 504		2b. STREET ADDRESS OF OPERATOR: Box 504											
3a. CITY OF OWNER:Joliet		3b. CITY OF OF		_									
Illinois	b. ZIP CODE: 60434	5a. STATE OF O	PPERATOR:	5b. ZIP CODE: 60434									
6. NAME OF CORPORATE DIVISION OR PL	ANT (IF DIFFERENT FROM OWNER):		11013										
LOCATED WITHIN CITY LIMITS:	☐YES ⊠NO		PRESS OF EMISSION SOUR	RCE:									
Ma. CITY: Joliet 9	b. LOCATED WITHIN CITY LIMITS: ☐ YES ☑ NO	10: COUNTY: W	ill	11. ZIP CODE: 60434									
T2. WAS THE EQUIPMENT DESCRIBED IN T	HIS INFORMATIONAL FORM INSTALLED A	T THE PLANT OR PR	EMISES OF THE APPLICA	ANT ON OR BEFORE APRIL 14, 19722									
	🛮 No 💛 Boiler was insta												
IF "NO," STATE WHETHER THE APPLIC UNDERTAKE AND COMPLETE, WITHIN A THIS INFORMATIONAL FORM:	CANT HAD, ON OR BEFORE APRIL 14, 1 REASONABLE TIME, A CONTINUOUS PRO	972, ENTERED INTO GRAM OF CONSTRUCT	A BINDING AGREEMENT ION OR MODIFICATION C	OR CONTRACTUAL OBLIGATION TO OF THE EQUIPMENT DESCRIBED IN									
	☐YES 🔀 NO	Gas fire	d conversion										
	RESULTS OF TESTS CONDUCTED IN ACCO												
POLLUTION.	PLANT OR PREMISES OF THE APPLICA	NI, COMPEY WITH A	PPLICABLE SUBSTANTIVE	REGULATIONS OF CHAPTER 2, AIR									
FUGTHERVING STORIES SOLLICIENT IC	ESTS, THE APPLICANT MAY SUBMIT OTH ACCURATELY ESTIMATE THE RATES OF	LMISSIONS OF CON	TAMINANTO EDOM TOUTO P	MICCION COURSE AND ENGINEE									
IN SHOW WITHING OF BUT THE ENGLYST	ONS OF SUCH CONTAMINANTS, EITHER MISES OF THE APPLICANT, COMPLY WIT	01 (1916 - 130 - 131 - COMP.T.	NATION LITTLE COMPEGNATED	NTC COOM OTHER COMPAGE									
	e we have the second of the se												

I.D. NO.	FOR OFFICIAL USE ONLY PERMIT APPLICATION NO.	F
		<u> </u>

GENERAL INFORMATION

- NOTE: APPLICANT MUST SUBMIT TWO COPIES (THREE IF LOCATED IN COOK COUNTY) OF EACH OF THE FOLLOWING:

 1. CONSTRUCTION PERMIT APPLICATION FORM (SEPARATE APPLICATION FORMS FOR EACH ITEM OF CONTROL EQUIPMENT NOT COVERED BY AN ATTACHED ADDENDUM).
 - 2. DIMENSIONED DRAWINGS, PLAN, ELEVATION (SECTIONED WHERE NECESSARY AND WHERE APPLICABLE) AND PLOT PLAN AND MAP SHOWING DISTANCES TO NEAREST BOUNDARY OF THE PROPERTY ON WHICH THE CONTROL EQUIPMENT IS LOCATED, AND THE DISTANCES TO NEAREST RESIDENCES, LODGINGS, NURSING HOMES, HOSPITALS, SCHOOLS, AND COMMERCIAL AND MANUFACTURING ESTABLISHMENTS.

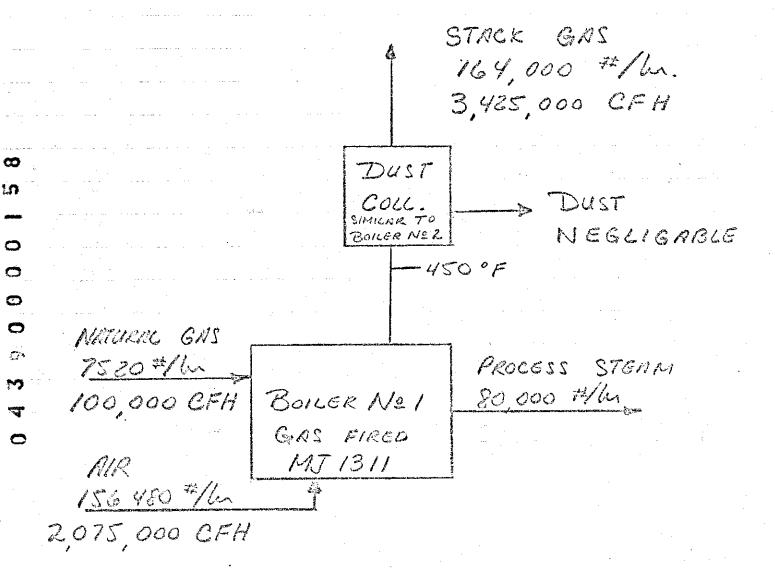
 3. FLOW DIAGRAM AS SPECIFIED IN THE INSTRUCTION SHEET.

	BOILER MANUFACTURER: Springfield (Cleaver Brooks)	15. MODEL NUMBER: 16. SERIAL NUMBER 50191A	
17.	OPERATION TIME OF BOILER:	18. PERCENT OF ANNUAL THROUGHPUT: 25	 } <u>~</u>
19.	RATED HEAT INPUT: 100,000 THOUSAND BTU/HR	20. TOTAL COST OF HEATING EQUIPMENT (NOT INCLUDING INSTALLATION):	=_
21.	OPERATING PRESSURE OF BOILER: 150 PSIG	22. PERCENT CAPACITY USED FOR SPACE HEATING:	
·	CAS	$RT = \frac{\text{(Boiler Hp) 8 CFM}}{\text{Furnace Volume}}$	
·23. ₂	GAS BURNER MANUFACTURER & MODEL NUMBER: - Cleaver Brooks WI700XCN2	24. BURNER VOLUME: 25. RETENTION TIME: 5.07	SEC
	MAXIMUM FIRING RATE: Input 27. AVERAGE FIRING RAT 110,000 SCFH 100,000	ATE: 28 AVERAGE HEAT CONTENT:	
29.	AVERAGE SULFUR CONTENT: 0 % BY WT 730,000,00	UMPTION: 31. EXCESS AIR: 20 % BY	
	OII	DIL FIRED UNITS	
32.	OIL BURNER MANUFACTURER & MODEL NUMBER:	33. BURNER VOLUME:	FT ³
34.	RETENTION TIME: SEC	35. MAXIMUM FIRING RATE: 36. AVERAGE FIRING RATE: THOUSAND BTU/HR THOUSAND BTU	
37.	TYPE OF OIL: 38. EST. A: NUAL CONSUMPTION:	39. AVERAGE HEAT CONTENT OF OIL:	//LB
40.	EXCESS AIR:	41. AVERAGE SULFUR CONTENT: 42. AVERAGE ASH CONTENT:	··
43.	OIL BURNER TYPE: ATOMIZING OR ATR ATOMIZING SPECIFY OTHER SPECIFY	44. DIRECTION OF FIRING: HORIZONTAL TANGENTIAL	 -
45.	OIL BURNER AUTOMATIC AU	AUTOMATIC AUTOMATIC FULL MODULATION	_
46.	TYPE OF COAL: BITUMINOUS ANTHRACITE	AL FIRED UNITS OTHER SPECIFY	<u></u> -
47.	AVERAGE SULFUR CONTENT: 48. AVERAGE ASH CONTENT:	49. MAXIMUM FIRING RATE: 50. AVERAGE FIRING RATE:	 17UD
51.	VOLATILE CONTENTS:	52. EXCESS AIR:	
53.	MAXIMUM SULFUR CONTENT:	54. MOISTURE CONTENT:	
55.	AVERAGE HEAT VALUE: 56. IDENTIFY SOURCE OF CO		
58.	TYPE OF FIRING:	TOTA	<u>/ t</u> R
a. [☐ PULÝERIZED DRY BOTTOM C. ☐ CYCLONE ☐ PULVERIZED WET BOTTOM d. ☐ SPREADER NO REIN.	e. SPREADER % REINJECTION	
59.	DIRECTION OF FIRING:	OTHER	
		TANGENTIAL CORNER SPECIFY	_

1.0.	. NO				_	1	FOR OFFICIAL	. USE ONLY	PERMIT	APPLICATI	ON NO. F											
		· · · · · · · · · · · · · · · · · · ·			(PRI	OR TO PASS	EXHAUST GAS AGE THROUGH	ANALYSIS ANY CONTROL EC	DUTPMENT													
NOTE	: IF THE EN VENT, THE	ISSION SOU APPLICANT	JRCE WHIC F SHALL C	H IS T OMPLET	HE SUBJECT	OF THIS CO	ONSTRUCTION	PERMIT APPLICA	TTON TO	SERVED BY	MORE THAN ONE	EXHAUST S	TACK OR									
CONT	TAMINANT	CONCENTRA	ATION		EMISSION R	ATE	METHO	O'OF MEASURE AN	O ANALYS	IS	METHOD OF MONITORING											
50.	CARBON MONOXIDE	a. 180	О РРМ	b.		LB/10 ⁶ BTU	c. Max	@ 50% exc	ess a:	d. Color	Colormetric per manuf											
61.	CARBON DIOXIDE	a.	РРМ	b.		LB/10 ⁶ BTU	d.			turer												
62.	CHLORINE	a. ,	ррм.	b.	-	LB/10 ⁶ BTU	c.	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	 		d.											
63.	HYDROCAR - BONS AS CH4.	а,	PPM	b.	.004	 LB/106BTU	<u> </u>	culated U.	S. AP	-42	d.		-									
64.	HYDROGEN CHLORIDE	a.	PPM	b.		LB/10 ⁶ BTU	c.				d.											
65.	HYDROGEN SULFIDE	a.	РРМ	b.		LB/10 ⁶ BTU	c				d.											
66.	NITROGEN	a.	PPM	ь.		-																
67	NITROGEN OXIDES AS NO2	a.	PPM	b.	.2	LВ/10 ⁶ ВТО LВ/10 ⁶ ВТО	c. May	ırer	d.		· · ·											
680	SULFUR DIOXIDE	á.	PPM	b.	lone																	
69	OTHER (SPECIFY)	a.	PPM	b.		LB/10 ⁶ BTU	_	· . · · · · · · · · · · · · · · · · · ·			d.											
70 0	PARTICULATE MATTER	a.	GRAIN SCE	b.	.0017	LB/10 ⁶ BTU		ılated US	ΛD_/ ₁ 2	-	d.											
71		MATTER CO				<u> </u>		ACH COMPONENT (AME SHALL	BE CIVEN IE CU	EMICAL NA	ME TO UK	INNOUS .								
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	HOW EMISSIO			D ONLY		ONS ARE EXI		CTLY TO THE AT	MOSPHERE													
72 75	₩	STACK		VENT		, GAS EXT	VELUCITY:	48.8	FPS	74. GAS	EXIT TEMPERAT	URE:	4	50 °F								
75.			☐ MAN			UTOMATIC		OMETRIC [(SPECIFY)_	• •											
⁷⁶ .O	DISTANCE OF OF THE APPL	THE STACK ICANT:	OR VENT	FROM	THE NEARES	T PLANT BOU	JNDARY FT.	77. HEIGHT OF	STACK OR	R VENT ABO	VE GRADE:		78	FT.								
78.	HEIGHT OF S	TACK OR VE	NT ABOVE	ROOF:		30	FT.	79. HEIGHT OF	TALLEST	BUILDING 1	WITHIN 150 FEE	T:	74	FT.								
SO.	YOUR DESIGN	ATION OF S	TACK:					81. AREA OF S	TACK OR V	/ENT AT EX	IT:	1	.9.65	FT ²								
82.	IF OTHER EN THIS APPLIC AS EXHIBIT	CATION, THE	JRCES OR E APPLICA	AIR PO NT SHA	LLUTION CO LL DEFINE	NTROL EQUI: THE EMISSIC	PMENT ARE ED ONS FROM SUC	CHAUSTED THROUGH OTHER EQUIPM	H THE STA	ACK OR VEN ATTACH SUC	T SERVING THE H INFORMATION	FOILTPMENT	COVERED) RV								
	TOTAL NUMBE		S IN EXHI	BIT G:	None																	
93.	- Nilkugen, A	MU HYDROCA	ARBUNS (A	S METH	ANE) EMITTI	ED FROM ALL	. SOURCES LO	NTS OF PARTICU CATED ON THE P OF THE PLANT O	MANT OR P	PREMISES.	INCLUDING THE	SK01221M3	EST1MAT	ED FROM								
	MATERIAL	- GOTERED	i i		X. AMOUNTS	3	1411 10003)	ONE-HOUR MAX		ś	arrilomni.	321,7 ONE-HOUR										
	PARTICULAT	E MATTER			7 0	SULFUR DIC	XIDE	1496		-	OXIDES AS NO ₂	 	95.6	LB								
	HYDROCARBO	NS AS CH4		<u>16</u>	<u>1,9.</u> LB	CARBON MON	OXIDE	222	.9 LE	Chrom	ic Oxide	.87	' LB									
																						

FLOW DIAGRAM

DRAWING No 10



SPRINGFIELD BOILER 80 000 #/L CLEAVER BROOKS GAS CONVERSION 2-CNZ BOILER No. 1 MJ 1311 CATER PILLAR TRACTOR CO. DECEMBER 15, 1972



STATE OF ILLINOIS ENVIRONMENTAL PROTECTION AGENCY DIVISION OF AIR POLLUTION CONTROL 2200 CHURCHILL ROAD SPRINGFIELD, ILLINOIS 62706

RICHARD B. OGILVIE, GOVERNOR WILLIAM L. BLASER, DIRECTOR

	FOR EXISTIN	A AND INFORMATION NG COMBUSTION EQUIPMENT AND	,	FOR I.D. NO.	OFFICIAL USE ONLY										
	•	NDIRECT HEATING lant Boiler No. 2, MJ131	3	PERMIT NO. DATE	F										
<u> </u>		tant borier No. 2, MJ131			A										
	NAME OF OWNER: Caterpillar Tracto	or Co.	16. NAME OF 0 Cate	PERATOR: erpillar Tract	or Co.										
2a.	STREET ADDRESS OF OWNER: Box 504														
3a.	CITY OF OWNER: Joliet		3b. CITY OF 0 Joli	PERATOR: Let	- ~										
4a.	STATE OF OWNER: Illinois	4b. ZIP CODE: 60434	5a. STATE OF T111in		5b. ZIP CODE: 60434										
6.	NAME OF CORPORATE DIVISION OF	R PLANT (IF DIFFERENT FROM OWNER):			1 00-0-										
Gr.	LOCATED WITHIN CITY LIMITS:	☐YES ☑NO		DRESS OF EMISSION SOU annahon Road	RCE:										
Ma.	CITY: Joliet	9b. LOCATED WITHIN CITY LIMITS: ☐YES 図NO	70: COUNTY:	Will	11. ZIP CODE: 60434										
12.	WAS THE EQUIPMENT DESCRIBED 1	N THIS INFORMATIONAL FORM INSTALLED	AT THE PLANT OR P	REMISES OF THE APPLIC	ANT ON OR BEFORE APRIL 14, 1972?										
O ₁	⊠ YES	□ NO		•											
O	IF "NO." STATE WHETHER THE AF UNDERTAKE AND COMPLETE, WITHI THIS INFORMATIONAL FORM:	PLICANT HAD, ON OR BEFORE APRIL 14, N A REASONABLE TIME, A CONTINUOUS P	1972, ENTERED INT ROGRAM OF CONSTRUC	O A BINDING AGREEMENT TION OR MODIFICATION	OR CONTRACTUAL OBLIGATION TO OF THE EQUIPMENT DESCRIBED IN										
0		☐YES ☐ NO	•		•										
0	240M MHFIHEK OK NOT 18F FWT22	THE RESULTS OF TESTS CONDUCTED IN ACTIONS OF CONTAMINANTS FROM THIS EMIS	SION SOURCE FITHE	P ALONE OR IN COMBINA	TION WITH CONTAMINANTS FROM										
;	POLLUTION.	SAME PLANT OR PREMISES OF THE APPLI	CANT, COMPLY WITH .	APPLICABLE SUBSTANTIV	E REGULATIONS OF CHAPTER 2, AIR										
*	ENGINEERING STUDIES SUFFICIEN	CH TESTS, THE APPLICANT MAY SUBMIT OF TO ACCURATELY ESTIMATE THE RATES	OF EMISSIONS OF CO	NTAMINANTS FROM THIS	EMISSION SOUDCE AND ENDINED										
4	. IO ZHOM MHEIHEK OK NOT THE EV	MISSIONS OF SUCH CONTAMINANTS, EITHE PREMISES OF THE APPLICANT, COMPLY W	R ALONE OR IN COMB.	INATION WITH CONTAMIN	MANTS EDOM ATHED CANDOES										
0															

APC-86, 1 copy, 3 pages, Boiler No. 2

APC-62, 1 copy, 3 pages, Boiler No. 2 Flow Diagram, 1 copy, 1 page, Drawing No. 11, Boiler No. 2

57. ANNUAL CONSUMPTION: Approx 6000

e. SPREADER % REINJECTION

OTHER SPECIFY

f. OTHER SPECIFY __

CORNER

TONS/YR

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1	.D.	ΝО.					Ι	Ī	Ι	T]				•	F	OR O)FFI	CIAL	ŲS	SE ON	LY		PER	MIT	ДРР	ICA	TION	מא		F				T				Ī
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14	•	BOILE Spr						:le	av	 rer		 3rc	oks	 ;)							15. N	·́Ла	MODE X W	NU P	MBE	g Oo					16.	SE	RIAL 501	. NUI 91	мве В	:R					
17	•	OPERA1	ION		4 4			ER: /DAY			7		DAYS,	/WK			1	7	WKS/	YR	18.		PERC	ENT	OF A	ANNUA DEC-	AL T	HB01	IE#PI ※ M	JT: VR-M	4 <u>7</u>					9	₹ SE	PT-N	vci	ģ	 -
.19		RATED						.00	,)				-	TH0	USA	ND	BTU/	HR	20.	•	TOTA:	N/A	ST (OF HE	ATI	NG I	Qui	MEN	ſ (1	OT	INCL	ונסט	NG	INST	ALL	ATIC	in):		
.21	•	OPERAT	ING	PRES	SUI	KE 0)F 8	1108	ER:							15	0		PS	IG	22.	•	PERC	ENT	CAPA	ACITY	us,	ED F	æ:	PACI	HE	AT I	۱G :						7	5	 %
						-				-				•						AS	FIRE	D (UNITS											•				,			_
- 23	•	GAS BU	RNER	MAN	UFA	CTU	REF	₹ &	MOD	EL	NUM	BEF	:	ï							24.		BURN		OLUN	ΊE:			FT.	2	j.	RETE	ENTI	ON 1	ΓIM	E:					EC
26.		MAXIMU	M FI	RING	i RA	ΛΤĖ:						S	CFH	27.	A	VER	AGE	FI	RING	RAT	E:		<u>-</u>			SCFH		28.		RAGI	HE	AT (ONT	ENT:	:			<u>-</u>	B1	- - Γυ/F	
29. 9		AVERAG	E SU	LFUR	CC	NTE	NT:	:			76	81	WT	30.	E	ST.	AN	NuA	L CO	NSUM	PTIO	N:				SCF		31.	£Χ(ESS	AIR	:								BY V	_
	•												فتن	Line					٠.	01	L FII	REC	INU C	TS		1									•		-				
32.)IL BU	RNER	MAN	IUFA	CTU	REF	₹ & .	MOD	EL	NUM	BER	:								33.	.	BURNE	ER V	OLUM	Œ:														F	 _3
34.	,	RETENT			: ·,														SI	EC	35.	. ?	MAX IN	IUM P	IRI			: ND B	TW/H			AVER	AGE	FIR	IN	G RA		 Dusa	ND B		
37.		YPE 0	F 01	L:					٠	38	· •	EST	· A.W	UAL	CO	NSU	MPT:	ION		.В	39.	,	AVERA	GE I	IEAT	CON	TEN	T OF	ØIL	:									В	TU/I	LB
40.		XCESS		•									.,				;	7.	BY VO	DL	41.	ļ	AVERA	GE S	ULF	UR C	ONTI		YWT			AVER	AGE	ASH	l Co	TAC	NT:			BY I	_
43.	. (IL BU YPE:	RNER			AT01	MIZ	ING			STI OR AT	EAN OMI	B ZING				THEF PECI									4	4.	DIR	ELTI	ON O		IRIN IZON				TAN	GENT	ΓĬΑL			-
45.	•	OIL BU	RNER L:				МА	NUA					AU	ITOM/ I-OF		Ç					TOMA GH-L							I TAN												-	_
-			· .																	COAL	. FIF	RED	UNI	TS		•										•					
٠46.	, 1 ~	YPE O	F CO#	۱L:				×	BI	TUM	INOU	US					7 44	JT HE	RACIT	F					OT I SB	HER ECIF	v							-			*********				
47.		VERAG			2.	6				48.			KAGE	ASH	CON		NT:		BY		49.	1	MAXIM 10,	UM F	IRI		ATE:				0.			FI 00		iG RJ		Tr	_		HR
		OLATI													3	8.	6	2	 S BY	WT	52.	E	EXCES	S AI	R:												41			BY W	-
53.	ħ	AX IMUI	M SUL	FUK	C0	NTE	NT:				2.	.6	- 2	2.8	}				ВУ		54.	N	10 I S T	URE	CON	TENT	:									14					_
55.	ρ	VERAGI	E HEA	T V		1,	4]	L 9		B7	ru/L					TIF	Y 5				AL E	ΒΥ n,	MINE	î'.	SE/	ĵΜi,	was	she	đ	5				con:		PTIO	N:			BY W	

HORIZONTAL

c. CYCLONE

☐ VERTICAL

d. Ex SPREADER NO REINJECTION

TANGENTIAL

TYPE UF FIRING: a.

PULVERIZED DRY BOTTOM

59. DIRECTION OF FIRING:

b. DULYERIZED WET BOTTOM

I.D.	NO		1_1_1				OK OFFICIAL	USE UNLY	PERMIT	APPLICATI	ON NO. F			
		-			(PRI	OR TO PASSA	EXHAUST GAS AGE THROUGH /	ANALYSIS ANY CONTROL EQL	IPMENT)	· · · · · · · · · · · · · · · · · · ·				
NOTE	: IF THE EN VENT, THE	ISSION SOU APPLICANT	RCE WHIC SHALL C	H IS OMPLE	THE SUBJECT TE SEPARATE	OF THIS CO SHEETS FOR	NSTRUCTION F R EACH SUCH S	PERMIT APPLICAT	ION IS S	ERVED 8Y	MORE THAN ONE	EXHAUST	STACK OF	R
	AMINANT	CONCENTRA	TION	EMISSION RATE			METHOD OF MEASURE AND ANALYSIS			z	METHOD OF MONITORING			
50.	CARBON MONOXIDE	a.	PPM	b.	.0874	L8/10 ⁶ 8TU	c. Calc	ulated US	AP -	42	d.			
61.	CARBON DIOXIDE	a.	PPM	b.		LB/10 ⁶ BTU	с.	· · · · · · · · · · · · · · · · · · ·	····		d.		****	
62.	CHLORINE	a. 、	РРМ.	b.		LВ/10 ⁶ ВТU	c.				d.			
63.	HYDROCAR- BONS AS CH4	a.	₽₽M	b.	.0437	LB/106BTU	c. Calc	ulated US	AP-42	2	d.			
64.	HYDROGEN CHLORIDE	a.	РРМ	ъ.		LB/10 ⁶ BTU	с.				d.	*		
65.	HYDROGEN SULFIDE	a.	PPM	b.		LB/10 ⁶ BTU	c.				d.			
66.	NITROGEN	a.	PPM	b.		LB/10 ⁶ BTU	с.	. +			d.			
67	NITROGEN OXIDES AS NO2	a.	PPM	b.	.655	LB/10 ⁶ BTU	c. Calcu	lated US	AP-42		d.			
⁶⁸ 0	SULFUR DIOXIDE	á.	PPM	b.	4.32	LB/10 ⁶ BTU	c. Calcu	lated US	AP-42	`	d.			
69	OTHER (SPECIFY)	а.	РРМ	b.	: e 🚓	LB/10 ⁶ BTU	с.				d.		w	
⁷⁰ 0	PARTICULATE MATTER	a.	GRAIN SCF	b.	3.36	LB/10 ⁶ BTU	c. Calcu	lated US	AP-42		d.			
71	PARTICULATE	MATTER CO	MPOSITIO	N EXP	RESSED AS P	ERCENT BY W	EIGHT OF EAC	CH COMPONENT (C	OMMON NA	ME SHALL	BE GIVEN IF CH	EMICAL N	AME IS (UNKNOWN):
0		Coal Fly					-							
0		JUAL FI	yasıı ı	.00%								······································		<u></u>
NOTE	: THIS SECT	ION TO BE	COMPLETE	ONL	Y IF EMISSI	ONS ARE EXH	AUSTED DIREC	CTLY TO THE ATM	OSPHERE	WITHOUT A	INV CONTROL FOR	TOMENT.		
72	HOW EMISSIO					, GAS EXIT		TEL TO THE ATH	OST HERE	T	EXIT TEMPERAT			
	_	STACK		/ENT				W-1-1	FPS			J		o _F
76.	DRAFT CONTR	OLS:	OR VENT			UTOMATIC	BARC			SPECIFY)	· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·
78.	OF THE APPL	ICANT:				I FLANT BUU	FT.	77. HEIGHT OF						FT.
	HEIGHT OF S	TACK OR VE	NT ABOVE	ROOF	:		FT.	79. HEIGHT OF	TALLEST	BUILDING	WITHIN 150 FEE	Τ:		FT.
80.	YOUR DESIGN	ATION OF S	TACK:				18	B1. AREA OF ST	ACK OR V	ENT AT EX	IT:			FT ²
82.	IF OTHER ENTHIS APPLICAS EXHIBIT	CATION, THE	RCES OR APPLICA	AIR P NT SH	OLLUTION CO ALL DEFINE	NTROL EQUIP THE EMISSIC	PMENT ARE EXP DNS FROM SUCH	AUSTED THROUGH	THE STA NT AND A	ICK OR VEN	IT SERVING THE CH INFORMATION	EQUIPMEN TO THIS	T COVERE	ED BY
	TOTAL NUMBE	R OF PAGES	IN EXHI	BIT G	•									
	-				· • · · · · · · · · · · · · · · · · · ·									
83.	NITROGEN, A	ND HYDROCA	RBONS (A:	MET.	HANE) EMITT	ED FROM ALL	. SOURCES LOC	ITS OF PARTICUL CATED ON THE PL OF THE PLANT OR	ANT OR P	REMISES.	INCLUDING THE	BON MONO EMISSION	XIDE, OX S ESTIMA	(IDES OF ATED FROM
	MATERIAL		I		AX. AMOUNTS	Ä		ONE-HOUR MAX.	· · · · · · · · · · · · · · · · · · ·	1		ONE-HOU	IR MAX. A	AMOUNTS
	PARTICULAT	E MATTER		-	LB	SULFUR DIO	XIDE ·	-	L8	NITROGEN	OXIDES AS NO2			LB
~ ~~~	HYDROCAR80	NS AS CHA			LB	CARBON MON	IOXIDE		LB:					

FLOW DINGRAM

DRAWING Nº 11 STACK ZURN SOZ STACK GAS 2,196,000 CFH @400°F SCRUBBER 7 75 % SOz Rem. PARTICULATE 23#/W SOL 432 #/6 199 % Part. Rein. S FLY NSH MULTI CLONE REMOVED WESTERN 309#/6 PRECIPITATOR - 400 of · CORC 4.37 Tous /la PROCESS STENM 80,000 #/h BOKER NE 2 CONC FIRED. NIR MJ 1312 80,000 #/lu. CAMBERS 123 #/W.

SPRINGFIELD BOILER 20 000 #/lu BOILER Nº Z MJ 131Z CATERPILLOR TRACTOR CO. DECEMBER 19, 197Z

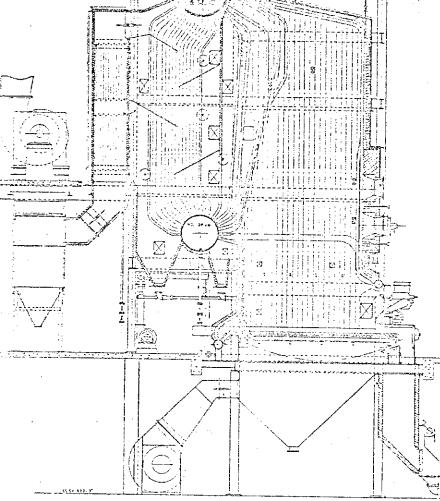
The state of the s

... of complete satisfaction!

Again CATERPILLAR TRACTOR Co. is getting additional Springfield Steam Generating Units—this time for the company's Tractor Plant at Joliet, Illinois. They add 160,000 lbs. of capacity to the four units previously installed in Peoria.

"Caterpillar" is one of the many leading American industrial organizations that have placed their seal of approval on Springfield with REPEAT ORDERS.* For Steam Generating Units that "are built to stay modern longer," check with Springfield now!

Springfield Boiler Co. specializes in the production of a complete range of steam generating equipment... ANY SIZE... ANY PRESSURE... ANY TEMPERATURE... AND FOR ANY FUEL. Springfield is organized to apply the same engineering skill to all contracts, large or small. We will be glad to submit a proposal covering your requirements.



*For a complete list, see your local Springfield Representative.

Check with Your Consulting Engineer on Modernization and New Plant Projects



2 New Springfield Units

The above drawing shows the arrangement of the two new Springfield units for the Joliet, Illinois, plant of Caterpillar Tractor Co.

UNIT CAPACITY—80,000 lbs. per hour, continuous; 90,000 lbs. per hour, two hour peak at 150 psig saturated. DESIGN EFFICIENCY—82.85% at 80,000 lbs.; 82.2% at 90,000 lbs.

FIRING—American Engineering Co. Spreader Stokers.
One unit equipped with auxiliary gas burners.

AUXILIARIES — Springfield Economizer, Dust Collector, Forced and Induced Draft Fans, Controls.

SPRINGHELD BOILER CO.

1953 E. Capitol Ave., Springfield, Illinois, U.S.A.

Worldwide Sales and Service

BENT TUBE BOILERS * STRAIGHT TUBE BOILERS * SUPETHEATERS * DESUPERHEATERS * AIR HEATERS

ECONOMIZERS * WATERWALE * PACKAGE BOILERS * COMPLETE STEAM GENERATING UNITS

See Gur Catalog
in SWEET'S



RICHARD B. OGILVIE, GOVERNOR WILLIAM L. BLASER, DIRECTOR

la.	Joliet Heating Plan	DATA AND INFORMATION FOR EXISTING POLLUTION CONTROL EQUIPMENT The Boiler No. 2, MJ13		NAME OF O	I.D. NO. PERMIT NO. DATE PERATOR:	c		
	Caterpillar Tracto	or Co.			erpillar Tra	ctor Co.		
2a.	STREET ADDRESS OF OWNER: Box 504		2b.	STREET AD Bos	DRESS OF OPERATOR: C 504			
3a.	city of owner: Joliet	•	3b.	CITY OF O Jol	PERATOR: Liet			
4a.	STATE OF OWNER: Tllinois	45. ZIP CODE: 60434	5a.	STATE OF Illinoi		5b. ZIP CODE: 60434		
6.		R PLANT (IF DIFFERENT FROM OWNER) E	TTTTIO		33.31		
4	LOCATED WITHIN CITY LIMITS:	☐YES © INO	. 8.		DRESS OF EMISSION SC nannahon Road			
33	CITY: Joliet	9b. LOCATED WITHIN CITY LIMI ☐YES ※NO	rs: 10:	COUNTY:	Will	11. ZIP CODE: 60434		
<u>12:</u>	☑ YES IF "NO," STATE WHETHER THE A	☐ NO PPLICANT HAD, ON OR BEFORE APRIL	14, 1972, 8	NTERED INT	O A BINDING AGREEME			
0	UNDERTAKE AND COMPLETE, WITH THIS INFORMATIONAL FORM:	IN A REASONABLE TIME, A CONTINUO	JS PROGRAM (IF CONSTRUC	TION OR MODIFICATION	N OF THE EQUIPMENT DESCRIBED IN		
0	THE THE TOTAL	☐ YES ☐	NO	٠				
-	THE APPLICANT SHALL PROVIDE THE RESULTS OF TESTS CONDUCTED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF CHAPTER 2, AIR POLLUTION, WHICH SHOW WHETHER OR NOT THE EMISSIONS OF CONTAMINANTS FROM OTHER SOURCES LOCATED AT THE SAME PLAN: OR PREMISES OF THE APPLICANT, COMPLY WITH APPLICABLE SUBSTANTIVE REGULATIONS OF CHAPTER 2, AIR POLLUTION.							
4	ENGINEERING STUDIES SUFFICIES TO SHOW WHETHER OR NOT THE EN	CH TESTS, THE APPLICANT MAY SUBMINT TO ACCURATELY ESTIMATE THE RAY ATSSIONS OF SUCH CONTAMINANTS, E. PREMISES OF THE APPLICANT, COMPI	TES OF EMISS THER ALONE	IONS OF CO OR IN COMB	NTAMINANTS FROM THIS INATION WITH CONTAM	S EMISSION SOURCE AND FURTHER INANTS FROM OTHER SOURCES		
					and the second s			

THESE DATA AND INFORMATION CONSIST OF APPLICATION FORMS AND OTHER EXHIBITS LISTED BY TITLE AND NUMBER OF PAGES BELOW.

APC-62, 1 copy, 3 pages, Boiler No. 2 Flow Diagram, 1 copy, 1 page, Boiler No. 2, Drawing No. 11

I.D. NO.		FOR OFFICIAL USE ONLY	PERMIT APPLICATION NO. C	

GENERAL INFORMATION

NOTE: APPLICANT MUST SUBMIT TWO COPIES (THREE IF LOCATED IN COOK COUNTY) OF EACH OF THE FOLLOWING:

1. CONSTRUCTION PERMIT APPLICATION FORM (SEPARATE APPLICATION FORMS FOR EACH ITEM OF CONTROL EQUIPMENT NOT COVERED

CONSINUCTION PERMIT APPLICATION FORM (SEPARATE APPLICATION FORMS FOR EACH TIEM OF CONTROL EQUIPMENT NOT COVERED BY AN ATTACHED ADDENDUM).

DIMENSIONED DRAWINGS, PLAN, ELEVATION (SECTIONED WHERE NECESSARY AND WHERE APPLICABLE) PLOT PLAN AND MAP SHOWING DISTANCES TO NEAREST BOUNDARY OF THE PROPERTY ON WHICH THE CONTROL EQUIPMENT IS LOCATED, AND THE DISTANCES TO NEAREST RESIDENCES, LODGINGS, NURSING HOMES, HOSPITALS, SCHOOLS, AND COMMERCIAL AND MANUFACTURING ESTABLISHMENTS. FLOW DIAGRAM AS SPECIFIED IN THE INSTRUCTION SHEET.

		PRIMARY CONT	ROL EQUIPMENT	SI	ECONDARY CONTROL EQUIPMENT	TERTIARY CO:	ITROL EQUIPMENT
14.	TYPE OF CONTROL EQUIPMENT: (e.g., MULTICLONE, BAGHOUSE)	a Multicle	one	b.		c.	
15.	MANUFACTURER:	Western a. Precipi		ь.		c.	
16.	MODEL:	Type 97 a. Mod. P2	/G12	b.		c.	
17.	SERIAL NUMBER:	Size 65 a. Ser. No	5-5 5. 1999	ь.		c.	
18.	COST OF CONTROL EQUIPMENT: (NOT INCLUDING INSTALLATION)	a. \$		b.	\$	c. \$	
	INLET GAS RATE (CFM AT INLET TEMPERATURE & PRESSURE):	a. 36,200	CFM	ь,	CFM	c.	CFM
20.	INLET GAS RATE (AT STANDARD CONDITIONS):	a.	SCFM	ь.	SCFM	с.	SCFM
29.	INLET GAS RATE MEASUREMENT):	a. 410	ΟF	b.	of	c.	o _F
22.	EXHAUST GAS RATE (CFM AT EXHAUST TEMPERATURE & PRESSURE):	a	CFM	ь.	CFM	с.	CFM
	EXHAUST TEMPERATURE (AT POINT OF - EXHAUST GAS RATE MEASUREMENT):	a.	or	Ь.	. 0 _F	с.	o _F
<u> </u>	DUCT VELOCITY (AT POINT OF INLET GAS RATE MEASUREMENT):	z	FPS	ь.	FPS	с.	Eb2
Ø	INLET GRAIN LOADING (AT POINT OF INLET GAS RATE MEASUREMENT):	a.	GRS/SCF	b.	GRS/SCF	с.	GRS/SCF
	GEOMETRIC MEAN DIAMETER OF PARTICULATE MATTER:	a.	MICRON	b.	MICRON	c.	MICRON
275-	STANDARD GEOMETRIC DEVIATION OF DISTRIBUTION OF PARTICLE SIZE BY WEIGHT:	a.		ь.		с.	
4 2 30	INLET CONCENTRATION BY VOLUME % OF GASEOUS CONTAMINANTS IN THE TOTAL GAS STREAM. (NEED NOT SUBMIT THIS INFORMATION IF FORM APC-63 IS SUBMITTED):						
		a.		ь.		_	
29.	PRESSURE DROP:	a. 2.4	INCHES OF WATER	ь.	INCHES OF WATER	с.	INCHES OF WATER
30.	CONTROL EQUIPMENT EFFICIENCY:	a93	U VOL %	ь.	□ VOL %	c.	O VOL 7
31.		a.	0F	b.	OF	С.	OF 0F
32.	AVERAGE OPERATION TIME OF CONTROL EQUIP 24 HRS/DAY	MENT: YS/WK	17 WKS/YR	33.	PERCENT OF ANNUAL THRUPUT: DEC-FEB 75% MAR-MAY 25%		•

I.D. NO.					FOR OFFICIA	L USE ONLY				c		
				<u>. </u>	EXHA	UST						
89. EXHAUST GAS CONTROL EQU			•			90. YOUR DESIG	NÄTION	GF STA	CK OR VENT:			
IS VENTED T		INSIDE	BUILDING	MTA 🔀	SPHERE							
-		OTHER	(SPECIFY):			Boiler Ho	N1160	Stan	le No. 2	-		
	NE ADE EVID	uictio.		. 02 CAC	EXIT VELOCITY:				GAS EXIT TEMPER	ATURE .		·
91. HOW EMISSIO	XX STACE		☐ VENT		st. 29.75		FPS	33.	GAS EXTS TEST EX		400	of
94. DRAFT CONTR	OLS:	X MANU	AL	AMOTUA 🖾	TIC	☐ BAROMETRIC		OT	HER (SPECIFY)		· · · · · · · · · · · · · · · · · · ·	_
95. HEIGHT OF S	TACK OR VE	IT ABOVE	GRADE:	97. HEI	GHT OF STACK OR	VENT ABOVE ROOF:		98.	HEIGHT OF TALLE FEST:	ST BUILDING W	THIN 150	
	78	ft.	•			30				74		FT
99. STACK OR VE	NT SERVES:			<u>.</u>		·	FT	100.	AREA OF STACK O	OR VENT AT EXI		
			ONLY THIS EQUIPMENT		THER EQUIPMENT	10 (10 miles)	- .,			19.65		FT ²
101. IF OTHER EN	MISSION SOU	RCES OR	AIR POLLUTIO	ON CONTROL E	QUIPMENT ARE EX	HAUSTED THROUGH T	HE STA	CK OR V	ENT SERVING THE	EQUIPMENT COVE	ERED BY	TON
TO THIS APP	LICATION AS	EXHIBI	T G.		OKE AND GOWNER	t OF THE EN1331ON	3 FRUN	20CH U	TREK EQUIPMENT A	ND ATTACH 3861	THEORPHI	104
TOTAL NUMBER	R OF PAGES	IN EXHI	BIT G: N	one			- "		The second second second			
		, * · ·		ley-1	en e	e e e e e e e e e e e e e e e e e e e	-	•				
THE APPLICATION THE EQUIPMENT	ND HYDROCAR	RONS (AS	S METHANE) E	MITTED FROM	ALL SQURCES LO	NTS OF PARTICULATE CATED ON THE PLAN OF THE PLANT OR P	5 OR PI	REMISES	. INCLUDING THE A	BON MONOXIDE, EMISSIONS ESTI 321.7 Acr	MATED FROM	1
MATERIAL		ONE-H	OUR MAX. AMO	UNȚS MATERI.	AL	ONE-HOUR MAX. A	40UNTS	MATERIA	AL	ONE-HOUR MAX.	AMOUNTS	
PARTICULAT	E MATTER		144.9	LB SULFUR	DIOXIDE	1496.8	LB	NITROG	EN OXIDES AS NO ₂	295.6	LB	
HYDROCARBO	NS AS CH4		161.9	LB CARBON	MONOXIDE	222.9	LB	Chr	omic Oxide	1.87#		
					EXHAUST G	AS ANALYSIS			-			:
CONTAMINANT	CONCENTR	ATION	EMISSI	ON RATE	METH	DD OF MEASURE AND	ANALYS	SIS	метно	OD OF MONITORI	NG	
1043 CARBON DIOXIDE		РРМ		LB/1068TI					d.			
105 CARBON MONOXIDE	ja			X LB/106BT	J .	1.4. 1.77 ()	A T)			M****		
TOS.	a	РРМ	ь.•0874	LB/HI	1	ulated U.S.	AP-	42	d.			
CHLORINE	a .	РРМ	b.	LB/HI					d		<u>.</u>	
TO7. HYDROCARBONS AS CH4	a.	PPM	ь.•0437	∠B/1068TI ∠B/HI ∠B/	R c. Calc	ulated U.S.	AP-	42	d.			
108. HYDROGEN CHLORIDE	a	PPM	b	LB/10 ⁶ BTI					d.			
109. HYDBOGEN SULFIDE	a.	PPM	ь.	LB/10 ⁶ BT					d.	,		
NITROGEN				☐ LB/10 ⁶ BT	U				d.			
ALTROGEN	a.		b.	LB/H	U		ΛD	4.2	4.			
OXIDES AS NO2	a.	РРМ	ь. . 655	L8/H	٠.	ulated U.S.	Ar-	44 .	d.			
SULFUR DIOXIDE	a.	PPM	b.4.32	LB/H	Ř c.				d.			
113. OTHER (SPECIFY)	a	PPM	b	LB/10 ⁶ BT	R c.				d.			
PARTICULATE MATTER		IN/SCF	b. = 233	⊠ LB/10 ⁶ 8T □ LB/H	R c. Calc	ulated U.S.			d.			
115. PARTICULATE	MATTER COM	POSITIO	N EXPRESSED	AS PERCENT	BY WEIGHT OF EA	CH COMPONENT (COM	4ON NA?	ie shali	L BE GIVEN IF CH	EMICAL NAME IS	UHKNOWN):	:
Coal Flyash 100%												
					•							
		-				•	•		•			ļ



RICHARD B. OGILVIE, GOVERNOR
WILLIAM L. BLASER, DIRECTOR

		A AND INFORMATION		FOR OFFICIAL USE ONLY				
		NG COMBUSTION EQUIPMENT		I.D. NO.				
	and the contract of the contra	NDIRECT HEATING	A	PERMIT NO.	F			
J	oliet Heating Plant	Boiler No. 3, MJ1313		DATE				
la.	NAME OF OWNER: Caterpillar To	ractor Co.	lb. NAME OF OPERATOR: Caterpillar Tractor Co.					
2a.	STREET ADDRESS OF OWNER: Box 504			DRESS OF OPERATOR: Box 504				
3a.	Joliet		3b. CITY OF O	PERATOR: Joliet				
4a.	STATE OF OWNER: Illinois	4b. ZIP CODE: 60434	5a. STATE OF Illin		56. ZIP CODE: 60434			
6.	NAME OF CORPORATE DIVISION OF	R PLANT (IF DIFFERENT FROM OWNER):	•					
1	LOCATED WITHIN CITY LIMITS:	☐YES 🔀 NO		ORESS OF EMISSION SO nahon Road	URCE:			
∵ 0 _a .	CITY: Joliet	9b. LOCATED WITHIN CITY LIMITS: ☐ YES ☑ NO	10: COUNTY:	Will	11. ZIP CODE: 60434			
12.	WAS THE EQUIPMENT DESCRIBED	IN THIS INFORMATIONAL FORM INSTALLED	AT THE PLANT OR P	REMISES OF THE APPLI	CANT ON OR BEFORE APRIL 14, 1972?			
0	₹ 3£YES	□no		•	, •			
0	IF "NO," STATE WHETHER THE AN UNDERTAKE AND COMPLETE, WITH THIS INFORMATIONAL FORM:	PPLICANT HAD, ON OR BEFORE APRIL 14, IN A REASONABLE TIME, A CONTINUOUS PR	1972, ENTERED INT OGRAM OF CONSTRUC	O A BINDING AGREEMEN TION OR MODIFICATION	T OR CONTRACTUAL OBLIGATION TO OF THE EQUIPMENT DESCRIBED IN			
O ,		YES NO	4					
⊕ .	SHOW WHETHER OR NOT THE EMISSIONS OF CONTAMINANTS FROM THIS EMISSION SOURCE, EITHER ALONE OR IN COMBINATION WITH CONTAMINANTS FROM THE SOURCE OF THE APPLICANT COMPLY WITH ADDITION OF CHAPTER OF CHAP							
	POLLUTION. IN LIEU OF ONE OR MORE OF SHI	CH TESTS, THE APPLICANT MAY SUBMIT OT	HER STANDARD TEST	THE INFORMATION OF T	UE DETAILS AND DESULTS OF			
A W	ENGINEERING STUDIES SUFFICIES TO SHOW WHETHER OR NOT THE ES	NT TO ACCURATELY ESTIMATE THE RATES O MISSIONS OF SUCH CONTAMINANTS, EITHER PREMISES OF THE APPLICANT, COMPLY WI	F EMISSIONS OF CO ALONE OR IN COMB	NTAMINANTS FROM THIS INATION WITH CONTAMI	EMISSION SOURCE AND FURTHER			
0	CONTROL OF THE SAME FEATURE OF	TABLES OF THE REFERENCE, CONFEE WI		STANSIVE REGULATIONS	or charter 2, AIR POLLUTION.			

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I.D. NO.	PERMIT APPLICATION N). F []		
				

GENERAL INFORMATION

- NOTE: APPLICANT MUST SUBMIT TWO COPIES. (THREE IF LOCATED IN COOK COUNTY) OF EACH OF THE FOLLOWING:

 1. CONSTRUCTION PERMIT APPLICATION FORM (SEPARATE APPLICATION FORMS FOR EACH ITEM OF CONTROL EQUIPMENT NOT COVERED
 - BY AN ATTACHED ADDENDUM).

 DIMENSIONED DRAWINGS, PLAN, ELEVATION (SECTIONED WHERE NECESSARY AND WHERE APPLICABLE) AND PLOT PLAN AND MAP SHOWING DISTANCES TO NEAREST BOUNDARY OF THE PROPERTY ON WHICH THE CONTROL EQUIPMENT IS LOCATED, AND THE DISTANCES TO NEAREST RESIDENCES, LODGINGS, NURSING HOMES, HOSPITALS, SCHOOLS, AND COMMERCIAL AND MANUFACTURING ESTABLISHMENTS.

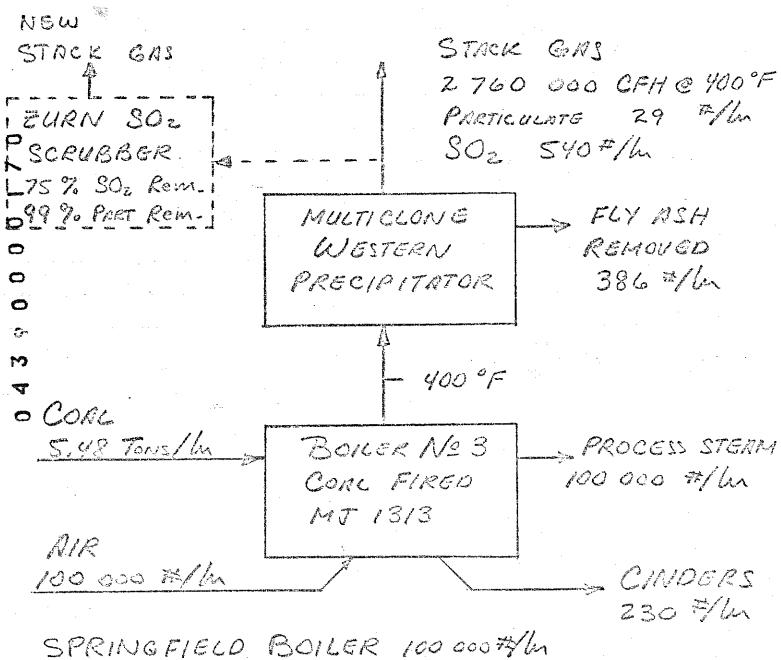
 FLOW DIAGRAM AS SPECIFIED IN THE INSTRUCTION SHEET.

	• · · · · · · · · · · · · · · · · · · ·	
14.	BOILLER MANUFACTURER: Springfield (Cleaver-Brooks)	15. MODEL NUMBER: 16. SERIAL NUMBER 51115
17.	OPERATION TIME OF BOILER: 24 HRS/DAY 7 DAYS/WK 17 WKS/YR	18. PERCENT OF ANNUAL THROUGHPUT: DEC-FEB/5 % MAR-MAY 25 % JUNE-AUG % SEPT-NOV %
19.	RATED HEAT INPUT: 125,000 THOUSAND BTU/HR	20. TOTAL COST OF HEATING EQUIPMENT (NOT INCLUDING INSTALLATION): N.A
21.	OPERATING PRESSURE OF BOILER: 150 PSIG	22. PERCENT CAPACITY USED FOR SPACE HEATING: 75
	cas I	FIRED UNITS
23.	GAS BURNER MANUFACTURER & MODEL NUMBER:	24. BURNER VOLUME: 25. RETENTION TIME: SEC
26. CO	MAXIMUM FIRING RATE: 27. AVERAGE FIRING RAT	
29.	AVERAGE SULFUR CONTENT: 30. EST. ANNUAL CONSUM	
_	OII	L FIRED UNITS
32.	OIL BURNER MANUFACTURER & MODEL NUMBER:	33. BURNER VOLUME:
34.	RETENTION TIME: SEC	35. MAXIMUM FIRING RATE: B6. AVERAGE FIRING RATE: THOUSAND BTU/HR THOUSAND BTU/HR
37.	TYPE OF OIL: 38. EST. A: NUAL CONSUMPTION:	39. AVERAGE HEAT CONTENT OF OIL:
40.	EXCESS AIR: % BY VOL	41. AVERAGE SULFUR CONTENT: #2. AVERAGE ASH CONTENT: #8 BY WT #8 BY WT
43.	OIL BURNER STEAM TYPE: ATOMIZING OR AIR ATOMIZING SPECIFY.	44. DIRECTION OF FIRING:
45.	OU BURNER	TOMATIC GH-LOW GUITOMATIC
<u></u>		L FIRED UNITS
46.	TYPE OF COAL: Maintenance	OTHER SPECIFY
47.	AVERAGE SULFUR CONTENT: 48. AVERAGE ASH CONTENT: 5.9 % BY WT	49. MAXIMUM FIRING RATE: Input 50. AVERAGE FIRING RATE: Input 137,000 THOUSAND BTU/HR 125,000 THOUSAND BTU/HR
51.	VOLATILE CONTENTS: 38.6 % BY WT	52. EXCESS AIR: 40 % BY WT
53.	MAXIMUM SULFUR CONTENT: 2.6 - 2.8 % BY WT	54. MOISTURE CONFENT: 14.4 % BY WI
55.		OAL BY MINE AND SEAM: Ston, III. I washed 57. ANNUAL CONSUMPTION: 8.000 TONS/YR
58.	TYPE OF FIRING:	3,000
ā. 5.	□ PULŸERIZED DRY BOTTOM □ PULŸERIZED WET BOTTOM d. ☑ SPREADER NO REIN	e. SPREADER % REINJECTION JECTION f. OTHER SPECIFY
59.	DIRECTION OF FIRING:	OTHER
	ES HONEQUIAL ESTREMENTE	TANGENTIAL CORNER SPECIFY

1.0.	NO.]	F	OR OFFICIAL	USE ONLY	PERMIT A	PPLICATION NO. F	
				· · · · · · · · · · · · · · · · · · ·	(PRI		XHAUST GAS IGE THROUGH	ANALYSIS NNY CONTROL E	QUIPMENT)		
NOTE:	IF THE EM VENT, THE	ISSION SOURC APPLICANT S	E WHICH	H IS T	HE SUBJECT E SEPARATE	OF THIS CO	NSTRUCTION EACH SUCH	PERMIT APPLIC	ATION IS SE	RVED BY MORE THAN ONE E	XHAUST STACK OR
CONTA	MINANT	CONCENTRATI	ON		EMISSION R	ATE	METHOD	OF MEASURE A	ND ANALYSIS	МЕТНО	OF MONITORING
i).	CARBON MONOXIDE	a.	PPM	b.	.0874	LB/10 ⁶ BTU	c. Cal	culated 1	US AP-42	2 d.	
51.	CARBON DIOXIDE	a.	PPM	b.		LB/10 ⁶ BTU	с.			d.	
52.	CHLORINE	a	Р₽М.	b.		LB/10 ⁶ BTU	c.			d.	
53.	HYDROCAR- BONS AS CH4	a.	PPM	b.	.0437	LB/1068TU	c. Calc	ulated U	S AP-42	d.	
64.	HYDROGEN CHLORIDE	a.	PPM	b.		LB/10 ⁶ BTU	c.			d.	
65.	HYDROGEN SULFIDE	a.	PPM	b.		L8/10 ⁶ BTU	с.			d.	
56.	NITROGEN	a.	PPM	b.		LB/10 ⁶ BTU	c.	•		d.	
6 75~	NITROGEN OXIDES AS NO2	à.	P PM	ь.	.655	LB/10 ⁶ BTU	c. Calc	ulated U	S AP-42	d.	
680	SULFUR DIOXIDE	a.	PPM	b.	4.32	LB/10 ⁶ BTU	c. Calc	ulated U	S AP-42	. d.	
69	OTHER (SPECIFY)	a.	PPM	b.	~	LB/10 ⁶ BTU	с.			d.	·
700	PARTICULATE MATTER	а.	GRAIN SCF	ь.	3.36	LB/10 ⁶ BTU	c. Calc	ulated U	S AP-42	d.	
710	PARTICULATE MATTER COMPOSITION EXPRESSED AS PERCENT BY WEIGHT OF EACH COMPONENT (COMMON NAME SHALL BE GIVEN IF CHEMICAL NAME IS UNKNOWN):										
0	Со	al Flyas	sh 10	0%							
0											
NOTE	: THIS SECT	TION TO BE CO	OMPLETE	D ONL	Y IF EMISSI	ONS ARE EXI	HAUSTED DIRE	CTLY TO THE A	ATMOSPHERE 1	WITHOUT ANY CONTROL EQU	IPMENT:
72		INS ARE EXHAL STACK		VENT	7:	. GAS EXIT	T VELOCITY:		FPS	74. GAS EXIT TEMPERAT	URE:
75	DRAFT CONTR	ROLS: [☐ MAN	UAL		UTOMATIC	☐ BAF	OMETRIC	OTHER (S	SPECIFY)	
⁷⁶ O	DISTANCE OF OF THE APPL	THE STACK (ICANT:	OR VENT	FROM	THE NEARES	T PLANT BOD	JNDARY FT.	77. HEIGHT (OF STACK OR	VENT ABOVE GRADE:	FT.
78.	HEIGHT OF S	STACK OR VEN	T ABOVE	ROOF	:		FT.	79. HEIGHT (OF TALLEST E	BUILDING WITHIN 150 FEE	T:FT.
80.	YOUR DESIGN	NATION OF STA	ACK:					81. AREA OF	STACK OR VE	ENT AT EXIT:	FT ²
82.	IF OTHER ENTHIS APPLICAS EXHIBIT	CATION, THE	CES OR APPLICA	AIR P NT SH	OLLUTION CO ALL DEFINE	NTROL EQUI: THE EMISSI	PMENT ARE E ONS FROM SUC	HAUSTED THRO H OTHER EQUI	UGH THE STAI PMENT AND A	CK OR VENT SERVING THE TTACH SUCH INFORMATION	EQUIPMENT COVERED BY TO THIS APPLICATION
	TOTAL NUMBI	ER OF PAGES	IN EXH	BIT G	i:	··········					
83.	NITROGEN, A	AND HYDROCAR	BONS (A	S MET	HANE) EMIT	TED FROM ALI	L SOURCES LO	CATED ON THE	PLANT OR P	ER, SULFUR DIOXIDE, CAR REMISES, INCLUDING THE S OF THE APPLICANT.	BON MONOXIDE, OXIDES OF EMISSIONS ESTIMATED FROM
	MATERIAL				AX. AMOUNT	1			AX. AMOUNTS		ONE-HOUR MAX. AMOUNTS
	PARTICULA [*]	TE MATTER			<u>. </u>	SULFUR DI	OXIDE	-	LB	NITROGEN OXIDES AS NO ₂	LB
	HYDROCARBO	ONS AS CH4			LI	GARBON MO	NOXIDE		L6		

FLOW DINGRAM

DRAWING Nº 12



SPRINGFIELD BOILER 100 000 7/60 BOILER NO 3 MJ 1313

CATERPILLAR TRACTUR Co.

December 22, 1972



RICHARD B. OGILVIE, GOVERNOR
WILLIAM L. BLASER, DIRECTOR

·	Joliet Heating	DATA AND INFORMATION FOR EXISTING OLLUTION CONTROL EQUIPMENT 3 Plant Boiler No. 3, M		I.D. NO. PERMIT NO. DATE	OFFICIAL USE ONLY				
la.	NAME OF OWNER: Caterpillar Tractor	c Co.	lb. NAME OF OPERATOR: Caterpillar Tractor Co.						
2a.	STREET ADDRESS OF OWNER: Box 504		2b. STREET ADDRESS OF OPERATOR: Box 504						
	CITY OF OWNER: Joliet	•	3b. CITY OF OF J	PERATOR: Oliet					
4a.	Illinois	4b. ZIP CODE: 60434	5a. STATE OF C		5b. ZIP CODE: 60434				
6.	NAME OF CORPORATE DIVISION OR	PLANT (IF DIFFERENT FROM OWNER):			114.1				
1.	LOCATED WITHIN CITY LIMITS:	□YES ⊠NO	8. STREET ADD	DRESS OF EMISSION SOUR	RCE:				
Pag.	CITY: Joliet	9b. LOCATED WITHIN CITY LIMITS: YES NO	10: COUNTY:	Wi11	11. ZIP CODE: 60434				
400	WAS THE EQUIPMENT DESCRIBED IN	THIS INFORMATIONAL FORM INSTALLED	AT THE PLANT OR PR	REMISES OF THE APPLICA					
0 0 0	IF "NO." STATE WHETHER THE APPLICANT HAD, ON OR BEFORE APRIL 14, 1972, ENTERED INTO A BINDING AGREEMENT OR CONTRACTUAL OBLIGATION TO UNDERTAKE AND COMPLETE, WITHIN A REASONABLE TIME, A CONTINUOUS PROGRAM OF CONSTRUCTION OR MODIFICATION OF THE EQUIPMENT DESCRIBED IN THIS INFORMATIONAL FORM:								
b o	THE APPLICANT SHALL PROVIDE THE RESULTS OF TESTS CONDUCTED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF CHAPTER 2, AIR POLLUTION, WHICH SHOW WHETHER OR NOT THE EMISSIONS OF CONTAMINANTS FROM THIS EMISSION SOURCE, EITHER ALONE OR IN COMBINATION WITH CONTAMINANTS FROM OTHER SOURCES LOCATED AT THE SAME PLANT OR PREMISES OF THE APPLICANT, COMPLY WITH APPLICABLE SUBSTANTIVE REGULATIONS OF CHAPTER 2, AIR POLLUTION.								
4	TO SHOW WHETHER OR NOT THE EMIS	TESTS, THE APPLICANT MAY SUBMIT OT TO ACCURATELY ESTIMATE THE RATES O SSIONS OF SUCH CONTAMINANTS, EITHER REMISES OF THE APPLICANT, COMPLY WI	F EMISSIONS OF CON ALONG OR IN COMPT	TAMINANTS FROM THIS E	MISSION SOURCE AND FURTHER				
0				•					

THESE DATA AND INFORMATION CONSIST OF APPLICATION FORMS AND OTHER EXHIBITS LISTED BY TITLE AND NUMBER OF PAGES BELOW.

APC-62, 1 copy, 3 pages, Boiler No. 3 Flow Diagram, 1 copy, 1 page, Boiler No. 3, Drawing No. 12

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	FOR OFFICIAL USE ONLY	
	PEI	RMIT APPLICATION NO. C
I.D. NO.	76	WILL WILLTEN TON 113: 01
		•

GENERAL INFORMATION

APPLICANT MUST SUBMIT TWO COPIES (THREE IF LOCATED IN COOK COUNTY) OF EACH OF THE FOLLOWING:

1. CONSTRUCTION PERMIT APPLICATION FORM (SEPARATE APPLICATION FORMS FOR EACH ITEM OF CONTROL EQUIPMENT NOT COVERED

BY AN ATTACHED ADDENDUM).

2. DIMENSIONED DRAWLINGS, PLAN, ELEVATION (SECTIONED WHERE NECESSARY AND WHERE APPLICABLE) PLOT PLAN AND MAP SHOWING
DISTANCES TO NEAREST BOUNDARY OF THE PROPERTY ON WHICH THE CONTROL EQUIPMENT IS LOCATED, AND THE DISTANCES TO NEAREST
RESIDENCES, LODGINGS, NURSING HOMES, HOSPITALS, SCHOOLS, AND COMMERCIAL AND MANUFACTURING ESTABLISHMENTS.

3. FLOW DIAGRAM AS SPELIFIED IN THE INSTRUCTION SHEET.

	3. FLOW DIAGRAM AS SPECIFIED IN THE	INSTRUCTION SHEET.		
		PRIMARY CONTROL EQUIPMENT	SECONDARY CONTROL EQUIPMENT	TERTIARY CONTROL EQUIPMENT
14.	TYPE OF CONTROL EQUIPMENT: (e.g., MULTICLONE, BAGHOUSE)	a. Multiclone	b.	c
15.	MANUFACTURER:	Western a. Precipitator	b.	с.
16.	MODEL:	Type 9VG12 Mod. P21340 AD	b.	с.
17.	SERIAL NUMBER:	Size 80-5 a Ser. No. 2340	b.	c.
18.	COST OF CONTROL EQUIPMENT: (NOT INCLUDING INSTALLATION)	a. 5	b. \$	c. \$
i9.	INLET GAS RATE (CFM AT INLET TEMPERATURE & PRESSURE):	a. 45,300 cFM	b. CFM	c, CFM
20.	INLET GAS RATE (AT STANDARD CONDITIONS):	a. SCFM	b. SCFM	c. SCFM
21:	INLET TEMPERATURE (AT POINT OF INLET GAS RATE MEASUREMENT):	a. 410 of	b. OF	c. o _F
22.	EXHAUST GAS RATE (CFM AT EXHAUST TEMPERATURE & PRESSURE):	a. CFM	b. CFM	c. CFM
පි	EXHAUST TEMPERATURE (AT POINT OF EXHAUST GAS RATE MEASUREMENT):	a. OF	ь. ^о ғ	c. OF
Ø	DUCT VELOCITY (AT POINT OF INLET GAS RATE MEASUREMENT):	z FPS	b. FPS	c. FPS
Ð	INLET GRAIN LOADING (AT POINT OF INLET GAS RATE MEASUREMENT):	a. GRS/SCF	b. GRS/SCF	c. GRS/SCF
26	GEOMETRIC MEAN DIAMETER OF PARTICULATE MATTER:	a. MICRON	b. MICRÓN	c. MICRON
27,	STANDARD GEOMETRIC DEVIATION OF DISTRIBUTION OF PARTICLE SIZE BY WEIGHT:	a.	b	c.
4	INLET CONCENTRATION BY VOLUME % OF GASEOUS CONTAMINANTS IN THE TOTAL GAS STREAM. (NEED NOT SUBMIT THIS INFORMATION IF FORM APC-63 IS SUBMITTED):			
		ā.	b.	C
29.	PRESSURE DROP:	a. 2.4 INCHES OF WATER	b. INCHES OF WATER	c. INCHES OF WATER
30.	CONTROL EQUIPMENT EFFICIENCY:	a. 93	b. WT %	C. UVOL 9
31.	EXHAUST GAS DEW POINT:	ā. OF	b. 0F	c. of
32.	AVERAGE OPERATION TIME OF CONTROL EQUIP HRS/DAY	PMENT: 17 WKS/YR	33. PERCENT OF ANNUAL THRUPUT: DEC-FEB 75 & MAR-MAY 25	JUNE-AUG % SEPT-NOV %

I.D. NO.						FOR OFFICIA	L USE ONLY	···		·	c		Ī.
						EXHA	UST				<u> </u>	<u> </u>	
89. EXHAUST GA			•				90. YOUR DES	IGNATIO	N OF ST	ACK OR VENT:	· 		
IS VENTED		l insid	DE BUILDING	Ē	ATMOS	PHERE	· · · · · · · · · · · · · · · · · · ·						
·		OTHER	R (SPECIFY):	·			n - 4 1						
				-			Boller	Hous	e Sta	ack No. 3			
	ONS ARE EXI		: D VENT		92. GAS	EXIT VELOCITY:	39	FPS	7	GAS EXIT TEMPER	RATURE:	400	0F
94. DRAFT CONT	ROLS:	X MAN	NUAL	X	AUTOMAT	ic {	BAROMETRIC		0 0	THER (SPECIFY)			<u> </u>
95. HEIGHT OF	STACK OR VE	NT ABOV	/E GRADE:		97. HEIG	HT OF STACK OR	VENT ABOVE ROOF	÷:	98.	HEIGHT OF TALLE	ST BUILDING W	ITHIN 150)
	· 7	8					ALC MANAGEMENT			FEET:	•		
99. STACK OR V							30	FT				.74	FT
331 STACK OR V	THE SERVES:		ONLY THIS			UED COUIDMENT			100.	AREA OF STACK (OR VENT AT EXI	T:	
		E)	EQUIPMENT		□ 0T8	HER EQUIPMENT					19.65		_
101. IF OTHER E	MISSION SOL	JRCES OR	R AIR POLIUT	ION C	ONTROL FO	IIPMENT ADE EVI	MINGTON TURQUON	THE CO	1016.55	VENT SERVING THE			FT ²
THIS APPLI TO THIS AP	CATION, THE PLICATION A	APPLIC S EXHIB	ANT SHALL D	EFINE	THE NATUR	RE AND QUANTITY	OF THE EMISSIO	NS FROM	ACK OR : 1 SUCH (VENT SERVING THE OTHER EQUIPMENT A	EQUIPMENT COVE ND ATTACH SUCH	ERED BY I INFORMA	TION
			IBIT G:				÷ •'						
													•
			•	1.5%						. •	= -		
102. THE APPLICA	INT SHALL SE	JBMIT AN	N ESTIMATE O	F THE	MAXIMUM (ONE-HOUR AMOUN	S OF PARTICULA	TE MATT	EO CIII	CIID STOYING CAR			
NITROGEN, A THE EQUIPME	IND HYDROCA: INT COVERED	RBONS (A BY THIS	AS METHANE) 5 APPLICATIO	EMITT N. AN	ED FROM ALD THE AREA	LL SOURCES LOCA	ATED ON THE PLANE F THE PLANT OR I	IT OR P	REMISES	FUR DIOXIDE, CARE , INCLUDING THE E	MISSIONS ESTI	MATED FRO)M
MATERIAL			HOUR MAX. AM				ONE-HOUR MAX.				321.7 Ac		_ -
PARTICULAT	E MATTER		144.9	LB	SULFUR D	IOXIDE	1496.8		ļ	EN OXIDES AS NO2	ONE-HOUR MAX.		
HYDROCARBO	NS AS CH4	 	161.9		CARBON MO		222.9	LB.	· · · · · · · · · · · · · · · · · · ·	omic Oxide		FS	
•		ł			<u> </u>	EVIIALIST CAS	<u> </u>	<u>-</u> -	CILL	OHITE OXIGE	1.87#		
<u> </u>	T .					EXHAUST GAS	ANALISIS			·			
CONTAMINANT	CONCENTR	ATION	EMISS			METHOD	OF MEASURE AND	ANALYS	IS	метно	D OF MONITORIN	IG.	
CARBON DIOXIDE	a.	PPM	b.		LB/HR	c.			•	d.			
CARBON MONOXIDE		РРМ	b. 0874		3/10 ⁶ BTU LB/HR	- Calcu	lated U.S.	ΔЪ.	- 42				
106. CHLORINE	. a .	PPM	10		3/10 ⁶ 8TU	ic. carea	racea 0.5.	AL	42	d.			
107.	a.	PPM	 	□ l¥l us	LB/HR	c				d.			
HYDROCARBONS AS: CH4 108.	a.	PPM	ь.•0437	<u> </u>	LB/HR	c. Calcu	lated U.S.	AP ·	- 42	d.			
HYDROGEN CHLORIDE	a.	PPM	b.		1/10 ⁶ 8TU LB/HR	c					17		<u> </u>
TOP. SUPPROBEN		DO:		LB	/10 ⁶ BTU					[d. 			
110.	la.	РРМ	16.	<u> </u>	LB/HR /106BTU	c.	-			d.			
NITROGEN NITROGEN	a.	PPM	ъ		LB/HR	c.				d.			
OXIDES AS NO2	a.	РРМ	b. •655		/1068TU LB/HR	c. Calcu	lated U.S.	AP-4	12	d.			
112. SULFUR DIOXIDE	a.	PPM	b.4.32	⊠ LB	/106BTU								
113. OTHER (SPECIEV)			D.T.J.	<u></u> □ LB,	LB/HR /10 ⁶ BTU	c. Calcu	lated U.S.	AP-4	+2	ď.			
	a	PPM	b.		LB/HR	c.				d.			
		N/SCF	b. •235	n	/10°BTU L8/HR	c. Calcu	lated U.S.	AP-4	-2	d.			
115. PARTICULATE	MATTER COMP	NOITIZO	EXPRESSED	AS PE	RCENT BY	EIGHT OF EACH	COMPONENT (COMP	ION NAMI	SHALL	BE GIVEN IF CHEM	MICAL NAME IS I	JHKNOWN):	
Coal	. F l yash	100%	%			•							
•											•		



RICHARD B. OGILVIE, GOVERNOR
WILLIAM L. BLASER, DIRECTOR

				FOR	OFFICIAL USE ONLY
		A AND INFORMATION NG COMBUSTION EQUIPMENT AND		I.D. NO.	
	than the sequence of a second control of the	NDIRECT HEATING	Company of the Control of the Contro	PERMIT NO.	F
	Joliet Heating P	lant Boiler No. 4, MJ359	3	DATE	
la.	NAME OF OWNER: Caterpillar Tract		Ib. NAME OF O	PERATOR: Caterpillar Tr	actor Co.
2a.	STREET ADDRESS OF OWNER:	<u> </u>		DRESS OF OPERATOR:	
	Box 504		3b. CITY OF O		
3a.	CITY OF OWNER: Joliet			Joliet	•
4a.	STATE OF OWNER:	4b. ZIP CODE:	5a. STATE OF		55. ZIP CODE:
	Illinois	60434	<u> </u>	inois	60434
6.	NAME OF CORPORATE DIVISION O	R PLANT (IF DIFFERENT FROM OWNER):			
₹.	LOCATED WITHIN CITY LIMITS:	☐YES 图NO		DRESS OF EMISSION SOU nahon Road	RCE:
ga.	CITY: Joliet	9b. LOCATED WITHIN CITY LIMITS: ☐YES ☑NO	10: COUNTY:	Wi11	11. ZIP CODE: 60434
12.	WAS THE EQUIPMENT DESCRIBED	IN THIS INFORMATIONAL FORM INSTALLED	AT THE PLANT OR P	REMISES OF THE APPLIC	ANT ON OR BEFORE APRIL 14, 1972?
	WAS THE EQUIPMENT DESCRIBED	IN THIS INFORMATIONAL FORM INSTALLED	AT THE PLANT OR P	REMISES OF THE APPLIC	ANT ON OR BEFORE APRIL 14, 1972?
T2. O	EXYES IF "NO," STATE WHETHER THE A UNDERTAKE AND COMPLETE, WITH	NO PPLICANT HAD, ON OR BEFORE APRIL 14, IN A REASONABLE TIME, A CONTINUOUS PR	1972 FNTEREN INT	O A BINDING AGREEMENT	OR CONTRACTUAL OBLIGATION TO
0	ETYES	NO ON OR REFORE APRIL 14	1972 FNTEREN INT	O A BINDING AGREEMENT	OR CONTRACTUAL OBLIGATION TO
0	IF "NO," STATE WHETHER THE A UNDERTAKE AND COMPLETE, WITH THIS INFORMATIONAL FORM:	□ NO PPLICANT HAD, ON OR BEFORE APRIL 14, IN A REASONABLE TIME, A CONTINUOUS PR □ YES □ NO	1972, ENTERED INT OGRAM OF CONSTRUC	O A BINDING AGREEMENT TION OR MODIFICATION	OR CONTRACTUAL OBLIGATION TO OF THE EQUIPMENT DESCRIBED IN
0	IF "NO," STATE WHETHER THE A UNDERTAKE AND COMPLETE, WITH THIS INFORMATIONAL FORM: THE APPLICANT SHALL PROVIDE COMPANY THE EMES	NO PPLICANT HAD, ON OR BEFORE APRIL 14, IN A REASONABLE TIME, A CONTINUOUS PR YES NO THE RESULTS OF TESTS CONDUCTED IN ACCESSIONS OF CONTAMINABLES FROM THIS EMISS	1972, ENTERED INT OGRAM OF CONSTRUC ORDANCE WITH APPL JON SQURCE, FITHE	O A BINDING AGREEMENT TION OR MODIFICATION ICABLE REGULATIONS OF R ALONE OR IN COMBINE	OR CONTRACTUAL OBLIGATION TO OF THE EQUIPMENT DESCRIBED IN CHAPTER 2, AIR POLLUTION, WHICH
0 0	IF "NO," STATE WHETHER THE A UNDERTAKE AND COMPLETE, WITH THIS INFORMATIONAL FORM: THE APPLICANT SHALL PROVIDE SHOW WHETHER OR NOT THE EMIS OTHER SOURCES LOCATED AT THE POLLUTION.	NO PPLICANT HAD, ON OR BEFORE APRIL 14, IN A REASONABLE TIME, A CONTINUOUS PR YES NO THE RESULTS OF TESTS CONDUCTED IN ACC SIONS OF CONTAMINANTS FROM THIS EMISS SAME PLANT OR PREMISES OF THE APPLIC	1972, ENTERED INT OGRAM OF CONSTRUC ORDANCE WITH APPL ION SOURCE, EITHE ANT, COMPLY WITH	O A BINDING AGREEMENT TION OR MODIFICATION ICABLE REGULATIONS OF R ALONE OR IN COMBINA APPLICABLE SUBSTANTIN	OR CONTRACTUAL OBLIGATION TO OF THE EQUIPMENT DESCRIBED IN CHAPTER 2, AIR POLLUTION, WHICH ITION WITH CONTAMINANTS FROM FE REGULATIONS OF CHAPTER 2, AIR
0 0 0	IF "NO," STATE WHETHER THE A UNDERTAKE AND COMPLETE, WITH THIS INFORMATIONAL FORM: THE APPLICANT SHALL PROVIDE SHOW WHETHER OR NOT THE EMIS OTHER SOURCES LOCATED AT THE POLLUTION. IN LIEU OF ONE OR MORE OF SUENGINEERING STUDIES SUFFICIE	NO PPLICANT HAD, ON OR BEFORE APRIL 14, IN A REASONABLE TIME, A CONTINUOUS PR YES NO THE RESULTS OF TESTS CONDUCTED IN ACCESSIONS OF CONTAMINABLES FROM THIS EMISS	1972, ENTERED INT OGRAM OF CONSTRUC ORDANCE WITH APPL ION SOURCE, EITHE ANT, COMPLY WITH	O A BINDING AGREEMENT TION OR MODIFICATION 	OR CONTRACTUAL OBLIGATION TO OF THE EQUIPMENT DESCRIBED IN THE EQUIPMENT DESCRIBED IN THE EQUIPMENT DESCRIBED IN THE EAST OF CHAPTER 2, AIR OF THE EMISSION SOURCE AND FURTHER LANTS FROM OTHER SOURCES

APC-86, 1 copy, 3 pages, Boiler No. 4
Flow Diagram, 1 copy, 1 page, Boiler No. 4, Drawing No. 13
APC-62, 1 copy, 3 pages, Boiler No. 4

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1.	D.	NO.		J	Ī					I				J	_	_			F	OR OFF	ICIAL	. U:	SE ON	LY		PERMI	T AP	PLIC	AT IO	· NO		_F [- -		T	1	-	_
																				GENI	RΔI	INS	ORMAT	TION								<u>'-'</u> -			<u> </u>			!_	ᆜ.
•	NOT		2.	BY DIN DIS RES	AN MENS STAN	AT SIO SICE: ENC	TACI NED S TO	HED DP O N	AD AWI EAR DGI	DEN NGS EST NGS	DUM P BO	M). PLAM DUNE	N, E DARY	LEV OF	ATIO	ON E PR	SE SOPE	CTIC	ONED	COOK C PLICATI WHERE WHICH T	OUNTY ON. FO	Y) DRM SSA	OF EA S FOR RY AN	CH (IH IT IERE	EM OI APPL:	F CO! [CABL	ITROL .E) A	ND PI	.OT 1	PLAN	AND	МА		OWII ARE	4G ST			
14.	8	OIL	₽R N				ER:				-									·	15		MODEL	NUN	1BER:			····		16.	SER	IAL	NIIN	IRER					
17.	0	IPER	ATIC	N T		ÜF	BO	IL				7		ПАУ	/S/WI			36	6	WKS/YR	18		10 PERCE)F AI	非/1 INUAL	THRO) ИСНІ	1117 +										
19.			D НЕ		12	5,	00							27.1			TH	ious/		BTU/HR	20.	•	TOTAL \$. COS							<u>5 %</u> от 11					SEPT LLAT			<u>) «</u>
21.	0	PER	ATIN	G PI	₹ES	SUK	E 0.	F	1108	ER:									50	PSIG	22.		PERCE			IΤΥ (JSED	FOR	SPAC	E HE	ATING	i :					7	5	
22				50.				-									٠.			GAS	FIRE	Dι	JNITS															-	
23.	· (a.	A3 1	BUKN	בא ז	14NU	JFA:	CTU	KEF	8 8 1	10D	EL	NUM	1BER	: :							24.	•	BURNE	R VO	LUME	:		Fī	3 2	5.	RETEN	TIO	N T	IME:	·				
26.			MUM						eta					CFH		7.	AVE	RAGE	FI	RING RA	TE:					CFH	28.			E HE	AT CO	NTE	NT:						SEC
29.	A	VER	AGE	SULF	IJR	CO	NTEI	NT :	\			,	6 ВҮ	WT	30).	EST	. AN	NUAL	CONSU	MPTIC	N:				SCF	31.	ΕX	CESS	AIR	:	·				<u></u>	-	BTU,	
	 I								•					•																									
32. O	0.	IL E	BURN	ER M	ANL	JFAC	TUF	RER	& N	IODI	EL	NUM	IBER	:						<u>U:</u>	_	_	UNIT		LUMÉ	:													_
^{34.}		•	IT I O															÷		SEC	35.	٨	1AX IMI	UM F		RAT		2 T +r/1	дв В 6	. #	VERA	GE F	FIR.	ING F					FT ³
37. O											38		EST	. A.	"NUA	IL C	DNSL	JMPT	ION:	LB	39.	F	VERA	GE H								-				THOUS	SAND	***	
40. 43.	•													,					ъ В	Y VOL	41.	A	VERAG	GE SI	JLFUI	CON		: 3Y W	12	. A	VERA	GE A	\SH	CONT	ENT	·:		BTU % BY	
45.	· TY	PE:			_[] A	MOT	IIZ.	ING			ST. OR AT	EAM OMI	Z ZING	 }			THE SPEC								44.	DI	RECT			RING ZONT/			—— П та	NGE	NTIA			
3				-n.				MAI	NUAL						AUTOI ON-OI	MAT I FF	(C	 .		☐ HI	TOMA GH-L	DW DIT			Е	AUTO FULI	TAMC L MOI	C DULAT	ION					-					_
46.		DF	OF C	OAL				_												COA	L FIR	ΕĎ	UNIT	S		-		7									·		-
'دُ	þ					CON	TEN	T.						MOG	ASI		[□ Al	NTHR.	ACITE	¥			\sqcup	OTHE SPEC	IFY .													
51.				:	2.	6			ВУ	WT	+0. 		44 Eh	(ሥዕ Է	45h	н t0	.9	NT:		BY WT			7,00			RATE HOUS	: I) IND E	ipu TU/H	t 5).	AVERA 12	GE 25,	FIR OC	I NG O	RAT T	E: HOUS	In AND	put BTU,	: /HR
53.								T:									_38	8.6) %	BY WT			XCESS													40		K BY	_
														2	.6	-2,	.8		9	BY WT	54.	M	DISTU	KE C	UNTE	M1:									1/	4.4			_

56. IDENTIFY SOURCE OF COAL BY MINE AND SEAM; washed Peabody-Wilmington, III. I washed

☐ TANGENTIAL

e. SPREADER

☐ CORNER

f.

OTHER SPECIFY _

AVERAGE HEAT VALUE: 11419

a.

— PULVERIZED DRY BOTTOM

b.

PULVERIZED WET BOTTOM

TYPE OF FIRING:

59. DIRECTION OF FIRING:

BTU/LB

K HORIZONTAL

c. \square CYCLONE

☐ VERTICAL

d. 🖾 SPREADER NO REINJECTION

% BY WT

TONS/YR

57. ANNUAL CONSUMPTION: 16,500

_% REINJECTION

OTHER SPECIFY

							·- ····	·····						
I.D.	NO					FOR OFFICIA	L USE ONLY	PERMIT	APPLICATI	ION NO.	F			
-				(PRIOR TO PASS	EXHAUST GA: SAGE THROUGH	ANALYSIS ANY CONTROL	_ EQUIPMENT)						
NOTE	: IF THE EM	IISSION SOURCE W APPLICANT SHALI	TICH I	S THE SUBJI LETE SEPAR	ECT OF THIS (ATE SHEETS FO	CONSTRUCTION OR EACH SUCH	PERMIT APPU STACK OR VE	ICATION IS S	ERVED BY	MORE THAN	ONE EXI	AUST ST	ACK OR	
CONT	AMINANT	CONCENTRATION		EMISSIO	N RATE	метно	D OF MEASURE	E AND ANALYSI	s	1	METHOD . C	F MONIT	ORING	
57.	CARBON MONOXIDE	a. PF	Μb.	.0874	LB/10 ⁶ 8TU	. f C-	alculate .S. AP			d.				
61.	CARBON DIOXIDE	a. PI	γм Ь.		LB/10 ⁶ ВТ(Ì	d.				
62.	CHLORINE	a. , Pf	м. ь.		LB/10 ⁶ BTI	c.				d.				
63.	HYDROCAR- BONS AS CH4	a. Pi	м ь.	.0437	LB/106BTU	lc.	alculate .S. AP			d.				
64.	HYDROGEN CHLORIDE	a. Pi	м ь.		LB/1068TL	C.	.U. M.	+4		d.				
65.	HYDROGEN SULFIDE	a. Pi	η Ь.		LB/10 ⁶ 871	Tc.				d.				· · · · · · · · · · · · · · · · · · ·
66.	NITROGEN	a. Pi	η Ь.		LB/10 ⁶ BTU	1_				ď.				
670	NITROGEN OXIDES AS NO2	a. PI	М Ь.	.655	LB/10 ⁶ BTU	c.	ulated I	J.S. AP -		d.	•			
68	SULFUR DIOXIDE	ía. Pl	м ь.	4.32	LB/10 ⁶ BTU	c.		J.S. AP -		d.	-			
69	OTHER	a. Pf	м ь.	-E			·	7. J. III.		d.		-	•	
700	(SPECIFY) PARTICULATE MATTER	a. <u>GRA</u> I		3.36	LB/10 ⁶ BTL	1	ulated I	J.S. AP -	. /12	d.				
71		MATTER COMPOSIT				<u> </u>		<u> </u>		BE GIVEN 1	F CHEMI	CAL NAM	E IS UN	KNOWN):
0	*.	Flyash 10						-						
0	COAL	. Fiyasii 10	U /o		 <u> </u>	·····						·	<u> </u>	· · · · · ·
	• THIS SECT	ION TO BE COMPLE	TED OF	VIV TE EMTS	STONS ADE EY	MAUSTED DID	ECTIV TO THE	ATMOSQUEDE	LITTUONT A	NV CONTROL	FOLITON	MENIT.		
72		NS ARE EXHAUSTED		ALT IF ENIX	73. GAS EXI			ATROSPHERE		EXIT TEMP				
		STACK [FPS	1			<u> </u>	<u> </u>	o _F
	DRAFT CONTR	OLS:	IANUAL		AUTOMATIC		ROMETRIC	OTHER (• • •				
	OF THE APPL	THE STACK OR VE ICANT:	NT FRO	OM THE NEAF	REST PLANT BO	OUNDARY FT.		OF STACK OR	VENT ABO	VE GRADE:				FT.
78.	HEIGHT OF S	TACK OR VENT ABO	VE ROC	OF:		FT.	79. HEIGHT	OF TALLEST	BUILDING	WITHIN 150	FEET:			FT.
80.	YOUR DESIGN	ATION OF STACK:			,		81. AREA C	IF STACK OR V	ENT AT EX	IT:				FT ²
82.		ISSION SOURCES C ATION, THE APPLI G.												
		R OF PAGES IN EX	CHIBIT	G:			-							
	-											S		
63.	NITROGEN, A	NT SHALL SUBMIT ND HYDROCARBONS NT COVERED BY TH	(AS ME	ETHANE) EMI	TTED FROM AL	L SOURCES L	OCATED ON TH	E PLANT OR P	REMISES.	INCLUDING	THE EMI			
	MATERIAL	ONE	-HOUR	MAX. AMOUN	ITS MATERIAL		ONE-HOUR	MAX. AMOUNTS	MATERIAL		011	E-HOUR	MAX. AMO	STMUC
	PARTICULAT	E MATTER	-		LB SULFUR DI	OXIDE		F8	NITROGEN	OXIDES AS	NO ₂			LB
	HYDROCARBO	NS AS CH4		·	LB CARBON MO	3G1XON		LB						

FLOW DINGRAM

DRAWING Nº 13

STACK GAS 2,028,000 CFH @ 175°F PARTICULATE 23 #/h SO2 540 #/h PROPOSED INTERIM MULTI CONE FLY ASH 18AS CONVERSION WESTERN REMOVED OZ/3 GAS FIRE PRECIPITATOR 392 1/2 13 COAL FIRE 500 °F · CORC 5.48 Tons/h BOKER No Y D. PROCESS STERM CONC FIRED 100 000 A/h MJ 1313 AIR 100 000 #/h CINDERS 230 7/6 ERIE CITY BOILER 100 000 M/h BOILER NO 4 HT 3598 CATERPILLAR TRACTOR CO December 22, 1972



RICHARD B. OGILVIE, GOVERNOR WILLIAM L. BLASER, DIRECTOR

		DATA AND INFORMATION FOR EXISTING POLLUTION CONTROL EQUIPMENT Plant Boiler No. 4			FO I.D. NO. PERMIT NO. DATE	C C C C C C C C C C C C C C C C C C C
la.	NAME OF OWNER: Caterpillar Tra	actor Co.	· 1b.	NAME OF O		llar Tractor Co.
2a.	STREET ADDRESS OF OWNER: Box 504		. 2b.	STREET AD	DRESS OF OPERATOR: Box 504	
	CITY OF OWNER: Joliet	•	. 36.	CITY OF O	PERATOR: Joliet	
4a.	STATE OF OWNER: Illinois	4b. ZIP CODE: 60434		STATE OF (55. ZIP CODE: 60434
6.	NAME OF CORPORATE DIVISION OF	R PLANT (IF DIFFERENT FROM	OWNER):		•	
Ò	LOCATED WITHIN CITY LIMITS:	☐YES ☑NO	8.	STREET AD	DRESS OF EMISSION SO	DURCE:
ශ	Joliet	9b. LOCATED WITHIN CITY		COUNTY:	Will	11. ZIP CODE: 60434
12.	WAS THE EQUIPMENT DESCRIBED I	IN THIS INFORMATIONAL FORM	INSTALLED AT THE	PLANT OR P	REMISES OF THE APPLI	CANT ON OR BEFORE APRIL 14, 1972?
0	₩ YES	□NO	g en e			•
0 0	IF "NO," STATE WHETHER THE AF UNDERTAKE AND COMPLETE, WITH THIS INFORMATIONAL FORM:	PPLICANT HAD, ON OR BEFORE IN A REASONABLE TIME, A CON	APRIL 14, 1972, ITINUOUS PROGRAM	ENTERED INTO OF CONSTRUCT	C A BINDING AGREEMEN TION OR MODIFICATION	IT OR CONTRACTUAL OBLIGATION TO OF THE EQUIPMENT DESCRIBED IN
_	SHOW WHETHER OR NOT THE EMISS	SIONS OF CONTAMINANTS FROM	THIS EMISSION SO	URCE. EITHER	R ALONE OR IN COMBIN	OF CHAPTER 2, AIR POLLUTION, WHICH HATION WITH CONTAMINANTS FROM VE REGULATIONS OF CHAPTER 2, AIR
4	IN LIEU OF ONE OR MORE OF SUC ENGINEERING STUDIES SUFFICIES TO SHOW WHETHER OR NOT THE EN LOCATED AT THE SAME PLANT OR	IT TO ACCURATELY ESTIMATE T HISSIONS OF SUCH CONTAMINAN	HE RATES OF EMIS ITS. EITHER ALONE	SIONS OF CON OR IN COMBI	TAMINANTS FROM THIS	EMISSION SOURCE AND FURTHER

THESE DATA AND INFORMATION CONSIST OF APPLICATION FORMS AND OTHER EXHIBITS LISTED BY TITLE AND NUMBER OF PAGES BELOW.

APC-62, 1 copy, 3 pages, Boiler No. 2

Flow Diagram, 1 copy, 1 page, Boiler No. 2, Drawing No. 13

I.D. NO.	FOR OFFICIAL USE ONLY PERMIT APPLICATION NO.	
	PERMIT APPLICATION NO.	

GENERAL INFORMATION

APPLICANT MUST SUBMIT TWO COPIES (THREE IF LOCATED IN COOK COUNTY) OF EACH OF THE FOLLOWING:

1. CONSTRUCTION PERMIT APPLICATION FORM (SEPARATE APPLICATION FORMS FOR EACH ITEM OF CONTROL EQUIPMENT NOT COVERED

BY AN ATTACHED ADDENDUM).

DIMENSIONED DRAWINGS, PLAN, ELEVATION (SECTIONED WHERE NECESSARY AND WHERE APPLICABLE) PLOT PLAN AND MAP SHOWING DISTANCES TO NEAREST BOUNDARY OF THE PROPERTY ON WHICH THE CONTROL EQUIPMENT IS LOCATED, AND THE DISTANCES TO NEAREST RESIDENCES, LODGINGS, NURSING HOMES, HOSPITALS, SCHOOLS, AND COMMERCIAL AND MANUFACTURING ESTABLISHMENTS. FLOW DIAGRAM AS SPECIFIED IN THE INSTRUCTION SHEET.

PRIMARY CONTROL EQUIPMENT SECONDARY CONTROL EQUIPMENT TERTIARY CONTROL EQUIPMENT TYPE OF CONTROL EQUIPMENT: (e.g., MULTICLONE, BAGHOUSE) Multiclone Multiclone с. MANUFACTURER: 15. Western Western Precipitator Precipitator Type 9VGR14 16. MODEL: Model P-111136B b. Type 9VGR10T c. SERIAL NUMBER: Size 65-5 4474 Size 4-1 b. c. COST OF CONTROL EQUIPMENT: (NOT INCLUDING INSTALLATION) 18. ъ. \$ c. \$

			·		. 1	•	{ ~ · · · ♥	
19.	INLET GAS RATE (CFM AT INLET TEMPERATURE & PRESSURE):	a.	48,000	О по по сем	ъ.	CFM.	ε.	CFM
20.	INLET GAS RATE (AT STANDARD CONDITIONS):	a.		SCFM	ь.	SCFM	с.	SCFM
55	INLET TEMPERATURE (AT POINT OF INLET GAS RATE MEASUREMENT):	a.	510	o _F	b.	of	c.	. 0F
22.	EXHAUST GAS RATE (CFM AT EXHAUST TEMPERATURE & PRESSURE):	a.		CFM	b.	CFM	c.	CFM
3	EXHAUST TEMPERATURE (AT POINT OF EXHAUST GAS RATE MEASUREMENT):	a.		OF	ь.	o _F	c.	0F
243	DUCT VELOCITY (AT POINT OF INLET GAS RATE MEASUREMENT):	z.	W 1	FPS	b.		c.	FPS
(2)	INLET GRAIN LOADING (AT POINT OF INLET GAS RATE MEASUREMENT):	a.	T	GRS/SCF	ь.	- GRS/SCF	с.	GRS/SCF
Ø	GEOMETRIC MEAN DIAMETER OF PARTICULATE MATTER:	a.	·	MICRON	ь.	MICRON	c.	MICRON
27:-	STANDARD GEOMETRIC DEVIATION OF DISTRIBUTION OF PARTICLE SIZE BY WEIGHT:	a.			ь.		c.	
4	INLET CONCENTRATION BY VOLUME % OF GASEOUS CONTAMINANTS IN THE TOTAL GAS STREAM. (NEED NOT SUBMIT THIS INFORMATION IF FORM APC-63 IS SUBMITTED):					•	2	
		a.			ь,	:	c.	÷
29.	PRESSURE DROP:	a.	2.32	INCHES OF WATER	ь.	INCHES OF WATER	с.	INCHES OF WATER
30.	control equipment efficiency: Total system	a	94.6	₹ MI ¾	b	☐ WI 3	c	U VOL :
31.	EXHAUST GAS DEW POINT:	a.		of	b.	o _F	с.	of
					·			

33.

WK5/YR

36

PERCENT OF ANNUAL THRUPUT: DEC-FEB 50 % MAR-MAY 25 %

AVERAGE OPERATION TIME OF CONTROL EQUIPMENT:

HRS/DAY

DAYS/WK

SEPT-NOV 25 3

JUNE-AUG

t.D. NO.		T			FOR OFFICIAL	L USE ONLY		-		c		<u></u> _
				-	EXHA	ust		·				
89. EXHAUST G						90. YOUR DESIG	GNATIO	N OF ST	ACK OR VENT:	<u> </u>	··	
CONTROL E		INSI	E BUILDING		HERE		٠					
	٠	.										
	·] OTHER	(SPECIFY):			Boiler	Hous	e Sta	ack No. 4			
91. HOW EMISS	IONS ARE EXH	AUSTED:		92 645 6	XIT VELOCITY:			1 02	GAS EXIT TEMPE	natuer.		
	⊠ cxSTAC		. TENT		TELOUITY.	27.6	FPS	- 1	. GAS CATT TENFE	RATURE.	175	oF
94. DRAFT CON	TROLS:	MAN 🔀	IUAL		c [BAROMETRIC		o	THER (SPECIFY)			
95. HEIGHT OF	STACK OR VE	NT ABOV	E GRADE:	97. HEIGH	T OF STACK OR	VENT ABOVE ROOF:	:	98.	HEIGHT OF TALL	EST BUILDING WIT	HIN 15	0
	- 78	en to the tra							FEET:			
•	70					30	FT			-	.74	FT
99. STACK OR	VENT SERVES:							100.	AREA OF STACK	OR VENT AT EXIT:		
		\mathbf{x}	ONLY THIS EOUIPMENT	. 🔲 отн	ER EQUIPMENT		- .					
<u> </u>			<u></u>								19.6	5 FT ²
101. IF OTHER E	EMISSION SOU	RCES OR	AIR POLLUTI	ON CONTROL EQU	IPMENT ARE EXH	AUSTED THROUGH T	THE STA	CK OR V	/ENT SERVING THE	EQUIPMENT COVER	ED BY	
TO THIS AF	PLICATION A	S EXHIB	IT G.	THE HILLIAMION	r www. dowertti	OF THE EMISSION	is FRUM			AND ATTACH SUCH	INFORM	ATION
	BER OF PAGES	IN EXH	IBIT G: No	one				Jac Line	-			
											٠	
						·		•				•
THE APPLICA	ANT SHALL SU	JBMIT AN	ESTIMATE OF	THE MAXIMUM O	NE-HOUR AMOUNT	TS OF PARTICULATI	E MATT.	ER. SUL	FUR DIOXIDE CAR	RON MONOXIDE OX	TINES O	 1E
MILITOGET A	AND DIDKULAR	KDUNA LE	IS PIETMANET I	"29LLLED ERDS AL	T SUBJECTS LOCA	ATED ON THE PLANT F THE PLANT OR PI	L UE D	DEMICEC	TRICKLINESS THE I	EMISSIONS ESTIMA	ITED FR	ROM
MATERIAL		}		DUNIS MATERIAL	· (III Nones) of	ONE-HOUR MAX. AN				321.7 Ac:		,
PARTICULA	TE MATTED	 			OVIDE			ļ		ONE-HOUR MAX. A		
	ONS AS CH4	1	44.9	LB SULFUR DI		1496.8		ļ	EN OXIDES AS NOS	295.6	LB	-
,	3H3 A3 CH4	. 1	61.9	LB CARBON MO	NOXIDE	222.9	LB	Chro	mic Oxide	1.87#		
					EXHAUST GAS	ANALYSIS		-				
CONTAMINANT	CONCENTR	ATION	FMTS51	ON RATE	WEITHOR	OF MEASURE AND	ΑΝΛΙ Υ	10	метис	DD OF MONITORING		
10437	CONCENTIO		L/11331	LB/106BTU	HETHOU	OF HEASURE AND	MMETS	113	reinc	D OF MONITORING		
CARBON DIOXIDE	a	PPM	1	LB/HR	c.				d.			
CARBON MONOXIDE	_	DDu	ь. •0874	LB/106BTU LB/HR	c. Calcu	lated U.S.	Δ10	/12				
106.	ia.	PPM		LB/10bBTU	c. Carcu	Tared 0.5.	AL	- 44	d.			
CHLORINE	a .	PPM	b.	LB/HR	c.				d.			
HYDROCARBONS AS CH4	a.	PPM	b.•0437	☑ LB/106BTU LB/HR	c. Calcu	lated U.S.	AP	- 42	d.			
IO8. HYDROGEN CHLORICE	a.	PPM		LB/10 ⁶ BTU	,							~
109.	1	rrn	b.	☐ LB/HR ☐ LB/10 ⁶ BTU	_ c.				d.	· · · · · · · · · · · · · · · · · · ·		
BYPROSEN BULFIDEN	a .	РРМ	b.		c.				d.			
NITROGEN	3.	PPM		LB/1068TU				· · · · · · · · · · · · · · · · · · ·				
RITROGEN			b.	LB/HR LB/1068TU	ic.				d.			
OXIDES AS NO2	a.	PPM	ь655	LB/HR	c. Calcu	lated U.S.	AP	- 42.	d.	<u> </u>		
SULFUR DIOXIDE	a.	PPM	1. 71 47 8	⅓ L8/10 ⁶ BTU ☐ L8/HR	c. Calcu	lated U.S.	AP	- 42	d.			
113. OTHER (SPECIFY)		· · · · · · · · · · · · · · · · · · ·		LB/10 ⁶ 8TU						· · · · · · · · · · · · · · · · · · ·		
	a.	PPM		LB/HR	c		_		d.	· · · · · · · · · · · · · · · · · · ·	·-··	
PARTICULATE MATTER		IN/SCF	b188[LB/10 ⁶ BTU	144	lated U.S.			d.			
15. PARTICULATE	MATTER COMP	POSITION	EXPRESSED A			COMPONENT (COMMO	MAN NC	E SHALL	BE GIVEN IF CHE	MICAL NAME-IS U	(KNOWN	1:
		1000								•		
Coal	F 1 yash	100%										
		**				•						



RICHARD B. OGILVIE, GOVERNOR WILLIAM L. BLASER, DIRECTOR

Jo	•	ATA AND INFORMATION FOR EXISTING EMISSION SOURCE Fly & Grate Ash Collection	∴ on System	FOR OFFICIAL USE CHLY I.D. NO. PERMIT NO. C DATE
la.	NAME OF OWNER: Caterpi	llar Tractor Co.	16. NAME OF O	OPERATOR: Caterpillar Tractor Co.
2a.	STREET ADDRESS OF OWNER: Box 504		2b. STREET AD	DDRESS OF OPERATOR: Box 504
За.	CITY OF OWNER: Joliet		3b. CITY OF O	
4a.	STATE OF OWNER: Illinois	4b. ZIP CODE: 60434	5a. STATE OF Illino	
6.	NAME OF CORPORATE DIVISION O	R PLANT (IF DIFFERENT FROM OWNER):		
7.	LOCATED WITHIN CITY LIMITS:	□YES €NO	8. STREET AD	DORESS OF EMISSION SOURCE: annahon Road
9a.	CITY: Joliet	9b. LOCATED WITHIN CITY LIMITS: ☐ YES ▼NO	10: COUNTY:	Will 11. ZIP CODE: 60434
- 0 0 0 0 % P P	IF "NO," STATE WHETHER THE AN UNDERTAKE AND COMPLETE, WITH THIS INFORMATIONAL FORM: THE APPLICANT SHALL PROVIDE SHOW WHETHER OR NOT THE EMISSIOTHER SOURCES LOCATED AT THE POLLUTION. IN LIEU OF ONE OR MORE OF SUCE ENGINEERING STUDIES SUFFICIES TO SHOW WHETHER OR NOT THE EMISSION.	NO PPLICANT HAD, ON OR BEFORE APRIL 14, IN A REASONABLE TIME, A CONTINUOUS PRI TYES NO THE RESULTS OF TESTS CONDUCTED IN ACCIONS OF CONTAMINANTS FROM THIS EMISS SAME PLANT OR PREMISES OF THE APPLICATION OF SUCH CONTAMINANTS. FITHER RATES OF THE ACCURATELY ESTIMATE THE RATES OF THE ACCURATELY ESTIMATE THE RATES OF THE ACCURATELY ESTIMATE THE RATES OF THE ACCURATELY ESTIMATE.	1972, ENTERED INT OGRAM OF CONSTRUC ORDANCE WITH APPL ION SOURCE, EITHE ANT, COMPLY WITH HER STANDARD TEST F EMISSIONS OF CON-	PREMISES OF THE APPLICANT ON OR BEFORE APRIL 14, 1972? TO A BINDING AGREEMENT OR CONTRACTUAL OBLIGATION TO CITION OR MODIFICATION OF THE EQUIPMENT DESCRIBED IN CITION OR MODIFICATION OF THE EQUIPMENT DESCRIBED IN CITION OR IN COMBINATION WITH CONTAMINANTS FROM APPLICABLE SUBSTANTIVE REGULATIONS OF CHAPTER 2, AIR CITION INFORMATION OF THE DETAILS AND RESULTS OF CONTAMINANTS FROM THIS EMISSION SOURCE AND FURTHER SINATION WITH CONTAMINANTS FROM OTHER SOURCES INTERVALLED IN THE STANTIVE REGULATIONS OF CHAPTER 2, AIR POLLUTION.

APC-64, 1 copy, 3 pages Fly & Grate Ash Collection System
Flow Diagram, 1 copy, 1 page, Fly & Grate Ash Collection System Described No. 14
APC-103, 1 copy, 2 pages, Fly & Grate Ash Disposal

APC-62, 1 copy, 5 pages, Fly & Grate Ash Collection System

		· · · · · · · · · · · · · · · · · · ·			
1,9, NO.	FOR OFFICIAL USE ONLY	PER APPLICATI	ON NO. S		
	GENERAL INFORMATION	•			
NOTE: APPLICANT MUST SUBMIT TWO COPIES	(THREE IF LOCATED IN COOK	COUNTY) OF EACH OF T	HE FOLLOWING:		
1. CONSTRUCTION PERMIT APPLICAT NOT COVERED BY AN ATTACHED A	(DDENDUM).				
2. DIMENSIONED DRAWINGS, PLAN, PLOT PLAN AND MAP SHOWING DI SOURCE IS LOCATED AND THE DI SCHOOLS AND COMMERCIAL AND 3. FLOW DIAGRAM AS SPECIFIED IN	STANCES TO NEAREST RESIDENC MANUFACTURING ESTABLISHMENTS THE INSTRUCTION SHEET.	ES, LOUGINGS, NUKSIN	IG HUMES, HUSPITA		
14. NAME OF PROCESS: Fly & Grate Ash Collection & Disposal Sy	stem 15. NAME OF E	ussion source equip acuum Ash Har	MENT: adling Syst	em	
16. EMISSION SOURCE EQUIPMENT MANUFACTURER:	17. MODEL NUME		18. SERIAL NL CR-1463		
Beaumont Birch Co.	Contrac		CK-1403		
19. NUMBER OF IDENTICAL EMISSION SOURCES: None	20. 1172 78000	CONTINUOUS	S	BATCH	
21. PROCESS WEIGHT RATE: 30,000 23. COMPOSITION OF RAW MATERIALS USED IN THE PROCESS AND PERI	22. BATCH RATE	2 BATC	·		LB/HR
Boiler house collected fly & grate ash.				•	
. NAME OF PRODUCTS MANUFACTURED:		TION RATE FOR EACH	ESTIMATED AVE	RAGE PRODUCTION	N
O . None	PRODUCT:	LB/HR	C		LB/HR
		LB/HR	f.		LB/HR
d	e	LB/ fix	· '		, 23,
9.	h	LB/HR	1		LB/HR
MASTE MATERIALS FROM MANUFACTURING PROCESS:	MAXIMUM AMOUNT • MATERIALS PROD		ESTIMATED AVE WASTE MATERIA	RAGE AMOUNT OF ALS PRODUCED.	
Fly Ash	ь	,	c30,0	000	LB/HR
6 4.	e	LB/HR	f		_ L8/HR
g	h	LB/HR	i	· · · · · · · · · · · · · · · · · · ·	_ LB/HR

PERCENT OF ANNUAL THROUGHPUIO DEC/FEB 50 % MAR/MAY 20

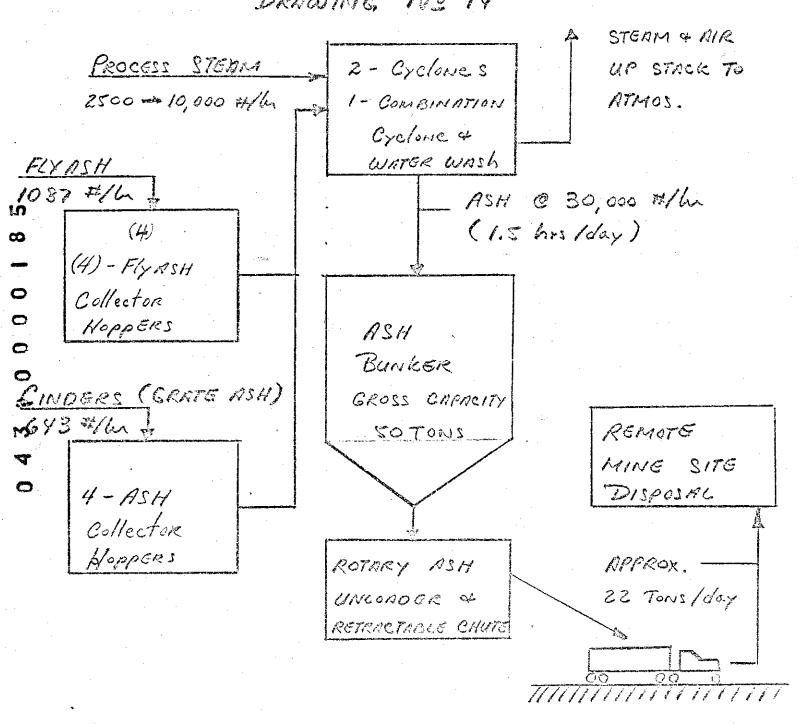
JUNE/AUG 10 3 SEP/NOV 20

AVERAGE OPERATION TIME OF EMISSION SOURCE: 52

WKS/YR

1.0.	NO					ŀ	OR OFFICIAL	USE ONL	r . Perm	IT APPLICA	TION NO. S	
					(F	ROM EMISSIO	EXHAUST GAS ON SOURCE TO	ANALYSIS CONTROL	EQUIPMENT)			
NOTE	: IF THE EM VENT, THE	ISSION SOURCE APPLICANT SE	E WHIC HALL C	H IS TH	HE SUBJECT	OF THIS CO	MSTRUCT ION	DEDMIT AL	DI ICITION I	S SERVED B	Y MORE THAN ONE	EXHAUST STACK OR
CONT	TNANIMA	CONCENTRATIO	ON		EMISSION RA	ATE ⁻	METHOD	OF MEAS	JRE AND ANAL	YSIS	METHO	D OF MONITORING
28.	CARSON MONOXIDE	a.	PPM	b.		LB/HR	c.			-	d.	
29.	CARBON DIOXIDE	a.	PPM	b.		LB/HR	с.				d.	
30.	CHLORINE	a.	PPM	b.	"	LB/HR	c.	•			d.	
31.	HYDROCAR- BONS AS CH4	a.	PPM	ծ.		LB/HR	c.				d.	
32.	HYDROGEN CHLORIDE	a.	PPM	b.		LB/HR	с.				d.	***************************************
33.	HYDROGEN SULFIDE	ā.	PPM	b.		L8/HR	c.				d.	
34.	NITROGEN	a.	PPM	Ь.		LB/HR	c.				d.	
35.	NITROGEN OXIDES AS NO2	à.	PPM	b.		LB/HR	c.				d. ·	
36. ©	SULFUR DIOXIDE	a.	PPM	b.		LB/HR	c.				d.	
37.	OTHER (SPECIFY)	a.	PPM	b.		LB/HR	с.				d.	
38. O	PARTICULATE MATTER	a. (GRAIN SCF	b. 3	30,000	LB/HR	с.			-	d.	74.4
33	PARTICULATE	MATTER_COMPO	ositio	N EXPRE	SSED AS PI	ERCENT BY W	EIGHT OF EA	СН СОМРОМ	IENT (COMMON	NAME SHAL	L BE GIVEN IF CH	EMICAL NAME IS UNKNOWN):
0	Coal fl	y ash &	cino	ders	100%.							
0											-	
NOTE	THIS SECT	ION TO BE COM	1PLETE	D ONLY	IF EMISSI	ONS ARE EXH	AUSTED DIRE	CTLY TO 1	HE ATMOSPHE	RE WITHOUT	ANY CONTROL EQU	IIPMENT:
40.		NS ARE EXHAUS	STED:	VENT	41	. GAS EXIT	VELOCITY:		FPS		AS EXIT TEMPERAT	URE:
	DRAFT CONTR	OLS:] MAN	UAL	☐ At	JTOMATIC	☐ BAR	OMETRIC	OTHE	R (SPECIFY)	•
44.	DISTANCE OF OF THE APPL	THE STACK OF	R VENT	FROM 1	THE NEAREST	T PLANT BOU	NDRY FT.	45. HEIG	HT OF STACK	OR VENT A	BOVE GRADE:	FI.
46.	HEIGHT OF S	TACK OR VENT	ABOVE	ROOF:			FT.	47. HEIG	HT OF TALLE	ST BUILDIN	G WITHIN 150 FEE	
48.	YOUR DESIGN	ATION OF STAC	CK:	,				49. AREA	OF STACK O	R VENT AT	EXIT:	FT ²
50.	IF OTHER EM THIS APPLIC AS EXHIBIT	ATION, THE A	ES OR PPLICA	AIR POL NT SHAL	LUTION COLL DEFINE	TROL EQUIP THE EMISSIC	MENT ARE EX	HAUSTED 1 H OTHER E	THROUGH THE QUIPMENT AN	STACK OR V D ATTACH S	ENT SERVING THE UCH INFORMATION	YE CEPEVOO THEMPIUDE TO THIS APPLICATION
		R OF PAGES II	N EXHI	BIT G:_								
								· · · · · · · · · · · · · · · · · · ·		······································		
51.	NITROGEN, A	NT SHALL SUBN ND HYDROCARBO NT COVERED BY	DIS (A	S METHA	NE) EMITTE	ED EROM ALL	SOURCES LG	CATED ON	THE PLANT O	R PREMISES	. INCLUDING THE	BON MONOXIDE, OXIDES OF EM(SSIONS ESTIMATED FROM
-	MATERIAL				STRUCMA.			T	IR MAX. AMOU	1		ONE-HOUR MAX. AMOUNTS
	PARTICULAT	E MATTER			LB	SULFUR DIO	XIDE			LB NITROG	EN OXIDES AS NO ₂	13
	HYDROCARBO	HS AS CH4			L8	CARBON MON	OXIDE			LB		

FLOW DINGRAM DRAWING, Nº 14



BERMMONT BIRCH ASH COLLECTION SYSTEM
BOILER HOUSE BLOG. N.
CHTERPILLAR TRACTOR Co.
VANUARY 2, 1973



RICHARD 8. OGILVIE, GOVERNOR WILLIAM L. BLASER, DIRECTOR

			·		FOR OFFICIAL USE ONLY
		ADDENDUM L		* D */O	
		DISPOSITION OF SOLID WASTE MATERIAL FROM		I.D. NO.	
		DRY COLLECTORS		PERMIT NO.	
		Joliet Heating Plant		DATE	
1.	NAME OF OWN	ER: Caterpillar Tractor Co.	2. NAME	OF CORPORATE DIVIS erpillar Tra	ION OR PLANT (IF DIFFERENT FROM OWNER):
3.	_	RESS OF EMISSION SOURCE:	4. CITY		ctor do:
	Ch	annahon Road		Joliet, I	11inois
	5.	Describe the processes which result in the production addendum.	of solid wa	ste material and at	tach this description to this
_		Total number of pages in Exhibit S: 1			
	6.	Describe the state of the waste material (slurry, cake proposed disposal site and attach this description to	, fine ash, this addend	cinders, powder, s' um as Exhibit T.	ludge, etc.) at the applicant's
9	-	Total number of pages in Exhibit T:1			
CC.		State the chemical composition, expressed as a weight addendum as Exhibit U: None			
	8.	State the volume and weight of the solid waste generat intervals: daily, weekly, monthly, and annually. (If	thace into	eval bacoc and not .	amalianhla ta wawa
0		operation, you may select different time bases, but mu this addendum as Exhibit V:	st justify:	such selection.) A	ttach your answer to
		Total number of pages in Exhibit V: 1		•	
	9.	Will the solid waste materia¹ be deposited in a sanita Agency? ☐ Yes ☑ No	ry landfill	permitted by the Er	nvironmental Protection
0		If "Yes" state the name and Agency permit number of su	th site.		
			AME		
-		PERMIT NUMBER			
Ç.		State if the colid waste material will be described as	a sanitary	landfill for which	an Agency permit application
M	10.	State if the solid waste material will be deposited in is pending. $\ \ \ \ \ \ \ \ \ \ \ \ \ $			
4	10.	is pending. Yes No If "Yes" give the name and legal description of this s			
4	10.	13 benguiât 🗆 Lea 🔀 MO			
M		13 benguiât 🗆 Lea 🔀 MO	ite:		
4		If "Yes" give the name and legal description of this s	ite: the applica	unt's plant or premi	
4		If "Yes" give the name and legal description of this s: Will the solid waste material be reused or recycled at	ite: the applica	unt's plant or premi	
4	n.	If "Yes" give the name and legal description of this so will the solid waste material be reused or recycled at If "Yes" describe the reclaiming process and attach to	the applicathis addend	unt's plant or premi dum as Exhibit W.	ises? Tyes No
4	n.	If "Yes" give the name and legal description of this so will the solid waste material be reused or recycled at If "Yes" describe the reclaiming process and attach to Total number of pages in Exhibit W: Will the solid waste material be transported to a remove of the solid waste material waste of the solid waste waste of the solid wa	the applicathis addend	ant's plant or premi dum as Exhibit W. reuse or recycling?	ises? ☐ Yes ☑ No
4	11.	If "Yes" give the name and legal description of this s Will the solid waste material be reused or recycled at If "Yes" describe the reclaiming process and attach to Total number of pages in Exhibit W:	the applicathis addend	ant's plant or premi dum as Exhibit W. reuse or recycling?	ises? ☐ Yes ☑ No
4	11.	If "Yes" give the name and legal description of this so will the solid waste material be reused or recycled at If "Yes" describe the reclaiming process and attach to Total number of pages in Exhibit W: Will the solid waste material be transported to a remoin of the solid waste material be transported to a remoin of the solid waste material be incinerated? Will the solid waste material be incinerated?	the applicathis addendate site for and attach to the state of the stat	ant's plant or premi dum as Exhibit W. reuse or recycling? to this addendum as	ises?
4	11.	If "Yes" give the name and legal description of this so will the solid waste material be reused or recycled at If "Yes" describe the reclaiming process and attach to Total number of pages in Exhibit W:	the applicathis addendate site for and attach to the state of the stat	ant's plant or premi dum as Exhibit W. reuse or recycling? to this addendum as	ises?
4	11.	If "Yes" give the name and legal description of this so will the solid waste material be reused or recycled at If "Yes" describe the reclaiming process and attach to Total number of pages in Exhibit W: Will the solid waste material be transported to a remoin of the solid waste material be transported to a remoin of the solid waste material be incinerated? Will the solid waste material be incinerated?	the applicathis addendate site for and attach to the standard attach	ant's plant or premi dum as Exhibit W. reuse or recycling? to this addendum as	ises?
4	11.	If "Yes" give the name and legal description of this so will the solid waste material be reused or recycled at If "Yes" describe the reclaiming process and attach to Total number of pages in Exhibit W:	the applications addendate site for and attach attach are critical in Contract of the	nut's plant or premi dum as Exhibit W. reuse or recycling? to this addendum as	ises? Yes No Yes No Exhibit X.

EXHIBIT S:

Boiler House grate and fly ash.

EXHIBIT T:

Fine ash, cinders and powder.

EXHIBIT V:

22 Tons/day 150 Tons/week 2900 Tons/year

EXHIBIT Z:

The fly and grate ash is hauled by truck Monday thru Friday for disposal at:

Peabody Coal Co. Gardner, Illinois Mine Pit No. 14 Grundy County



RICHARD B. OGILVIE, GOVERNOR WILLIAM L. BLASER, DIRECTOR

				FOR	OFFICIAL USE ONLY	
		DATA AND INFORMATION				
		FOR EXISTING		I.D. NO.		
	Aff	R POLLUTION CONTROL EQUIPMENT		DEGMIT NO	С	
Ta	Jist II. and the			PERMIT NO.		
		F 1 y & Grate Ash Collectic	n System	DATE		
la.	NAME OF OWNER:	Ilan Tracher Co	16. NAME OF O	PERATOR:		
		llar Tractor Co.		Caterpi	llar Tractor	Co.
24.	STREET ADDRESS OF OWNER:	D = == E0/	2b. STREET AD	DRESS OF OPERATOR:	D 50'	
		Box 504			Box 504	
За.	CITY OF OWNER:	Joliet	3b. CITY OF O	PERATOR:		
	CTATE OF OLDING				Joliet	
4a.	STATE OF OWNER: Illinois	4b. ZIP CODE:	5a. STATE OF		5b. ZIP CODE:	
6.		60434	Illino	is	60434	
٠.	NAME OF CORPORATE DIVISION O	R PLANT (IF DIFFERENT FROM OWNER):				
	LOCATED LITTURE COMM					•
C	LOCATED WITHIN CITY LIMITS:	Clyss Club	8. STREET ADI	DRESS OF EMISSION SOU	RCE:	
		☐ YES ☑ NO				
CO .	CITY: Joliet	96. LOCATED WITHIN CITY LIMITS:	10: COUNTY:	17277	11. ZIP CODE:	6040-
		YES 🔀 NO		Will		60435
12.	WAS THE EQUIPMENT DESCRIBED	IN THIS INFORMATIONAL FORM INSTALLED A	AT THE PLANT OR PI	REMISES OF THE APPLIC	ANT ON OR BEFORE APP	RIL 14, 1972?
_	₹ YES	□NO				•
0						
0	IF "NO," STATE WHETHER THE ALL INDERTAGE AND COMPLETE WITH	PPLICANT HAD, ON OR BEFORE APRIL 14, 1	972, ENTERED INTO	A BINDING AGREEMENT	OR CONTRACTUAL OBLI	GATION TO
	THIS INFORMATIONAL FORM:	IN A REASONABLE TIME, A CONTINUOUS PRO	GRAM OF CONSTRUCT	FION OR MODIFICATION	OF THE EQUIPMENT DES	CRIBED IN
_		YES NO				
C	-			•		
100	THE APPLICANT SHALL PROVIDE	THE RESULTS OF TESTS CONDUCTED IN ACCO	IDAANCE UITU AAALI	CARLE DECLUATIONS OF	CHARTER D. Are co.	
ئبية	3004 BUCKINER OF HOT THE ENTRY	STUNG OF LIMITADISMANTS EXIM THIS EMISSI	IN CONDCE ETTUER	I ALANE ON The Countries	てものい コステント ののいせんいせいしい	
	POLLUTION.	SAME PLANT OR PREMISES OF THE APPLICA	NT, COMPLY WITH A	APPLICABLE SUBSTANTIV	E REGULATIONS OF CHA	APTER 2. AIR
2,00	100011011.		*			
**	IN LIEU OF ONE OR MORE OF SUC	CH TESTS, THE APPLICANT MAY SUBMIT OTH	ER STANDARD TESTI	ING INFORMATION OR TH	F DETAILS AND PESULT	'S OF
	FUGINEENTIAN STOOLES SOLLICIES	II TO ACCURATELY ESTIMATE THE RATES OF	FMISSIONS OF COM	TAMINANTO COOM THIS :	MITCOLON CONDOC AND	C110 T110
		MISSIONS OF SUCH CONTAMINANTS, EITHER PREMISES OF THE APPLICANT, COMPLY WIT				
A			II MITETOMBEE 2083	PIMALLYE KEGULALIUNS (JE CHAPIER Z. AIR PO	ILLUTION.
\circ						

[.D. NO.	FOR OFFICIAL USE ONLY PERM	HIT APPLICATION NO. C
1.0. 10.		

GENERAL INFORMATION

NOTE:

APPLICANT MUST SUBMIT TWO COPIES (THREE IF LOCATED IN COOK COUNTY) OF EACH OF THE FOLLOWING:

1. CONSTRUCTION PERMIT APPLICATION FORM (SEPARATE APPLICATION FORMS FOR EACH ITEM OF CONTROL EQUIPMENT NOT COVERED

BY AN ATTACHED ADDENDUM).

2. DIMENSIONED DRAWINGS, PLAN, ELEVATION (SECTIONED WHERE NECESSARY AND WHERE APPLICABLE) PLOT PLAN AND MAP SHOWING
DISTANCES TO NEAREST BOUNDARY OF THE PROPERTY ON WHICH THE CONTROL EQUIPMENT IS LOCATED, AND THE DISTANCES TO NEAREST
RESIDENCES, LODGINGS, NURSING HOMES, HOSPITALS, SCHOOLS, AND COMMERCIAL AND MANUFACTURING ESTABLISHMENTS.

3. FLOW DIAGRAM AS SPELIFIED IN THE INSTRUCTION SHEET.

	3. FLOW DIAGRAM AS SPECIFIED IN TH	INSTRUCTION SHEET.	T						
	•	PRIMARY CONTROL EQUIPMENT	SI	ECONDARY CONTROL EQUIPMENT	TERTIARY CONTROL EQUIPMENT				
14.	TYPE OF CONTROL EQUIPMENT: (e.g., MULTICLONE, BAGHOUSE)	a. Cyclone	b.	Cyclone	c. Cyclone & spray wash				
15.	MANUFACTURER:	a. Beaumont Birch Co.	Ь.	Beaumont Birch Co.	c. Beaumont Birch Co.				
16.	MODEL:	a. Special	Ь.	Special	c. Special				
17.	SERIAL NUMBER:	a. CR-14634	ь.	CR-14634	c. CR-14634				
18.	COST OF CONTROL EQUIPMENT: (NOT INCLUDING INSTALLATION)	a. \$	Ь.	\$	c. \$				
19.	INLET GAS RATE (CFM AT INLET TEMPERATURE & PRESSURE):	a. CFM_	ь.	CFM	c. CFM				
26.	INLET GAS RATE (AT STANDARD CONDITIONS):	a. SCFM	Ь.	SCFM	c. SCFM				
ထု	INLET TEMPERATURE (AT POINT OF INLET GAS RATE MEASUREMENT):	a. OF	ь.	. 0 t	c. of				
ZZ:	EXHAUST GAS RATE (CFM AT EXHAUST TEMPERATURE & PRESSURE):	a. CFM	ь.	CFM	c. CFM				
9	EXHAUST TEMPERATURE (AT POINT OF EXHAUST GAS RATE MEASUREMENT):	a. OF	Ь.	o _F _	c. OF				
240	DUCT VELOCITY (AT POINT OF INLET GAS RATE MEASUREMENT):	z FPS	b.	FPS	c. FPS				
(5)	INLET GRAIN LOADING (AT POINT OF INLET GAS RATE MEASUREMENT):	a. GRS/SCF	ь.	GRS/\$CF	c. GRS/SCF				
10	GEOMETRIC MEAN DIAMETER OF PARTICULATE MATTER:	a. MICRON	b.	MICRON	c. MICRON				
273	STANDARD GEOMETRIC DEVIATION OF DISTRIBUTION OF PARTICLE SIZE BY WEIGHT:	a.	b.		c.				
4	GASEOUS CONTAMINANTS IN THE TOTAL GAS STREAM. (NEED NOT SUBMIT THIS INFORMATION IF FORM APC-63 15 SUBMITTED):								
		a.	Ь.	· ·	с.				
29.	PRESSURE DROP:	a. INCHES OF WATER	ь.	INCHES OF WATER	c. INCHES OF WATER				
30.	CONTROL EQUIPMENT EFFICIENCY:	a.Est. 90 VOL %	ъ	Est. 90 VOL %	с. Est. 95 🔛 VOL %				
31.	EXHAUST GAS DEW POINT:	a. OF	b.	٥Ł	c. at				
32.	AVERAGE OPERATION TIME OF CONTROL EQUIL	PMENT: 52 WKS/YR	33.	PERCENT OF ANNUAL THRUPUT: DEC-FEB 50% MAR-MAY 20	3 JUNE-AUG 10 3 SEPT-NOV 20 3				

		•	· +1
I.D. NO.	FOR OFFICIAL	AL USE ONLY PERMIT APPLICATION	ON NO. C
	BAGHOUSES AND	CYCLONES	
BAGHOUSE	PRIMARY CONTROL EQUIPMENT	SECONDARY CONTROL EQUIPMENT	TERTIARY CONTROL EQUIPMENT
56. METHOD OF PRIOR COOLING:	LIQUID SPRAY	LIQUID SPRAY	☐ LIQUID SPRAY
	EXCESS AIR VOLCFM	EXCESS AIR VOLCFM	EXCESS AIR VGLCFM
	EXTENDED DUCTWORK	EXTENDED DUCTWORK	☐ EXTENDED DUCTWORK
	1. LENGTH FT 2. DIAMETER IN 3. TYPE OF DUCT MATERIAL 4. THICKNESS OF DUCT	1. LENGTH FT 2. DIAMETER IN 3. TYPE OF DUCT MATERIAL 4. THICKNESS OF DUCT	1. LENGTHFT 2. DIAMETERIN 3. TYPE OF DUCT MATERIAL
• • • • • • • • • • • • • • • • • • • •	MATERIALIN 5. PAINT COLOR	MATERIALIN 5. PAINT COLORIN	4. THICKNESS OF DUCT MATERIAL IN 5. PAINT COLOR
Najvaranja sa kalendarian sa sa sa sa	6. GAS VELOCITY FPS OTHER (SPECIFY)	6. GAS VELOCITYFPS OTHER (SPECIFY)	6. GAS VELOCITYFPS OTHER (SPECIFY)
	a.		
57. CLEANING METHOD:	SHAKER REVERSE AIR	SHAKER REVERSE AIR	SHAKER REVERSE AIR
6	a	D OTHER (SPECIFY)	OTHER (SPECIFY)
58. TYPE OF CLOTH MATERIAL:	a	b.	с.
59. FILTER RATIO:	a. CFM/FT ²	b. CFM/FT ²	c. CFM/FT ²
CYCLONE	PRIMARY CONTROL EQUIPMENT	SECONDARY CONTROL EQUIPMENT	TERTIARY CONTROL EQUIPMENT
60. TYPE OF CLONE:	⊠SIMPLE ☐ MULTICLONE a.	D. SIMPLE ☐ MULTICLONE	XISIMPLE □ MULTICLONE
61. FOR MULTIPLE UNITS GIVE NUMBER OF CLONES:	a.	b.	c.
62. CONE HEIGHT:	a. 18 IN	b. 18 _{IN}	c. 8 IN
63. INLET WIDTH:	a. 8 IN	b. 8 IN	c. 8 IN
64. BODY HEIGHT:	a. 72 in	b. 72 IN	c. 36 IN
-	i		411

36

8

2500-10,000 #/hr

steam

a.

a.

IN

IN

FPS

FPS

MICROMS

ь. -

b.

ь.

36 IN

8 _{IN}

FPS

FPS

MICRONS

С,

65. BODY DIAMETER:

66. OUTLET DIAMETER:

67. INLET VELOCITY:

69. CUT SIZE:

68. EXIT VELOCITY FROM CLONE:

36 IN

18 IN

FPS

FPS

MICRONS

I.D.	NO		FOR OFFICIAL	USE ONLY	PERMIT APPLICATI	10N NO. C				
WET COLLECTOR GENERAL INFORMATION										
		PRIMARY CON	TROL EQUIPMENT	SECONDARY	CONTROL EQUIPMENT	TERTIARY CO	NTROL EQUIPMENT			
70.	TYPE OF WET COLLECTOR:	CYCLONE SPRAY OTHER (SPEC	ORIFICE MECHANICAL CIFY)	CYCLONE SPRAY OTHER (SPE	ORIFICE MECHANICAL CIFY)	CYCLONE SPRAY OTHER (SPEC	ORIFICE MECHANICAL IFY)			
n.	INLET SCRUBBANT COMPOSITION AND WT. % EACH:	c	WT. %	COMPOSITION d		composition g h				
72.	PH VALUE OF INLET SCRUBBANT:	. a.	,	b.		с.				
73.	OUTLET SCRUBBANT COMPOSITION WT. % EACH:	COMPOSITION a b		COMPOSITION d e f		composition g. h.				
74.	SCRUBBANT FLOW:	а.	GPH:	· b.	GPH	с.	GPH			
75.	SCRUBBANT MAKEUP RATE:	a.	GPH	b.	GPH	с.	GPH			
ප	SCRUBBANT MAKEUP COMPOSITION AND WT. % SOLUTE:	a.	WT. %	b.	WT. %	c.	WT. %			
ල ල	VAPOR PRESSURE OF LIQUID CONTAMINANT AT OPERAT- ING TEMPERATURE:	a.	PSIA	b.	PSIA	c.	PSIA			
78.	PRESSURE DROP	a.	INCHES OF WATER	b.	INCHES OF WATER	c. SIMPLE	INCHES OF WATER			
75?	TYPE OF MIST ELIMINATOR:	BAFFLES a. OTHER	□ NONE	SIMPLE BAFFLES b. 0THER	☐ NONE	BAFFLES c. OTHER	NOME			
9	scrubber Air Washer	PRIMARY CONT	ROL EQUIPMENT	SECONDARY	CONTROL EQUIPMENT	TERTIARY COM	ITROL EQUIPMENT			
,	NOZZLE PRESSURE:	a.	PSIA	b.	PSIA	c. (65 psig	AI29 (
81.	CONTACT AREA:	a.	FT ²	b.	FT2	c. 7.06	FT2			
82.	TYPE OF PACKING:	a		b.	·	с.	· ·			
83.	LENGTH OF PACKED BED:	a.	· IN	ხ.	IN	€.	IN			
84.	SCRUBBER CROSS- SECTIONAL AREA:	a.	FT ²	b.	FT ²	c. 7.06	F†2			
	VENTURI SCRUBBER	PRIMARY CONT	ROL EQUIPMENT	SECONDARY (CONTROL EQUIPMENT	TERTIARY CON	TROL EQUIPMENT			
85.	THROAT DIAMETER:	a.	FT	b.	FT	с.	FT			
86.	GAS VELOCITY AT THROAT:	a.	FPS	b.	FPS	c	· FPS (

87. CORRELATION COEFFICIENT:

I.B. NO.		T			FOR OFFICIAL	L USE ONLY	·	<u> </u>	c I	ĺ	
					EXHA	ust		,	'		
89. EXHAUST GAS CONTROL EOU		····	• .			90. YOUR D	ESIGNATION	OF STACK OR VENT:			
IS VENTED TO		INSIDE	BUILDING	☐ ATMOSP	HERE						
	П	OTHER	(SPECIFY):				Unc	lesignated			
	. _					•					
91. HOW EMISSIO			7		XIT VELOCITY:			93. GAS EXIT TEMPE	RATURE:		
94. DRAFT CONTR	X STAC		VENT		n & Varia		FPS -	Est. 212 ⁰ 4			0F
	!	MANU		AUTOMATI		BAROMETRI		OTHER (SPECIFY)	None		
95. HEIGHT OF S	TACK OR VE	NT ABOVE	E GRADE:	97. HEIGH	T OF STACK OR	VENT ABOVE R	00F:	98. HEIGHT OF TALL	EST BUILDING W	THIN T	50
`	⁻ 78 ft										
99. STACK OR VE	NT SERVES:			•			4 F3	IOU. AREA OF STACK	OD VENT AT EVE		FT
- -	e e ej		ONLY THIS	П отн	ER EQUIPMENT		~	A THE TOTAL STATE			
			EQUIPMENT		•		•	•		1.77	7 FT ²
101. IF OTHER EM	ISSION SOU	RCES OR	AIR POLLUTION	CONTROL EQU	IPMENT ARE EX	HAUSTED THROU	GH THE STA	CK OR VENT SERVING THE	EQUIPMENT COV	ERED BY	~ /
TO THIS APPLIC	MITON, IME	APPLICA	4NI SHALL DELIG	NE THE NATUR.	E AND QUALITIT	Y OF THE EMIS	SIONS FROM	SUCH OTHER EQUIPMENT A	AND ATTACH SUCI	INFOR	MATION.
TOTAL NUMBE	R OF PAGES	IN EXH	IBIT G: NON	IE							-
·		,	. 4	eta .	A ^A			#		-	
							•	•			
102- THE APPLICAN	T SHALL SU	JBMIT AN	ESTIMATE OF T	HE MAXIMUM (NE-HOUR AMOUN	ITS OF PARTICU	LATE MATTE	ER, SULFUR DIOXIDE, CAR	BON MONOXIDE,	OXIDES	· ·
THE EQUIPMEN	ID HYDROCAF IT COVERED	BY THIS	S METHANE) EMI APPLICATION,	TTED FROM AL AND THE AREA	LL SOURCES LOC (IN ACRES) C	CATED ON THE P OF THE PLANT O	LANT OR PE OR PREMISES	ER, SULFUR DIOXIDE, CAR REMISES, INCLUDING THE GOF THE APPLICANT.	EMISSIONS ESTI 321.7 Acr	MATED (es	FROM
MATERIAL		1	OUR MAX. AMOUN	1		ONE-HOUR MAX			ONE-HOUR MAX.		
PARTICULATE	MATTER	144	. 9	LB SULFUR DI	OXIDE	1496.8	LB	NITROGEN OXIDES AS NO ₂	295.6		LB
HYDROCARBON	IS AS CH4	161	.9	LB CARBON MC	NOXI DE	222.9	LB	Chromic Oxide	1.87#		
		·			EXHAUST GA	S ANALYSIS					
CONTAMINANT	CONCENTR	ATTON	EMISSION	DATE	METUO	D OF MEASURE	AND AMALYS	TC METE	OD OF MONITORI	NC	
1043	CONCENTR	ATTON		L8/1068TU	METRU	U UF MEASURE	AND ANALTS	15 MEIN	UD UP MUNITURI	NG .	
CARBON DIOXIDE	a.	PPM	b. 🗆	LB/HR	c.	WA	18724	d.			
CAREON MONOXIDE	a.	РРМ	ь. 🗆	LB/106BTU LB/HR	c.			d.			
106. CHLORINE			=	LB/106BTU							
	a	РРМ		L8/HR L8/1068TU	_ c	· · · · · · · · · · · · · · · · · · ·	·	d.			
108.	a.	PPM	ь.	L8/HR	c			d.			
***************************************	а.	PPM	b. 🗌	LB/10 ⁶ BTU LB/HR	c.			ď.			
HYDROGEN	_	nnu		LB/106BTU							
110.	a.	PPM	b. U	LB/HR LB/1068TU	c.			d.			
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OXIDES AS MOS	a.	РРМ	ь.	LB/HR	c.			d.			
SULFUR DIOXIDE	·	PPM	i	LB/1068TU							
113.	à.	rrm_	b. []	L8/HR L3/10 ⁶ BTU	c.			d.			
	a.	PPM	b. 🗍	LB/HR	lc.			d.			
PARTICULATE MATTER			b. 15 😡	LB/10 ⁵ 87U LB/HR	c. & col.	pased on Lection e	efficie	ncy l _d .			ļ
115. PARTICULATE	MATTER COM	POSITION	EXPRESSED AS	PERCENT BY	WEIGHT OF EAC	H COMPONENT (COMMON NAM	E SHALL BE GIVEN IF CH	EMICAL NAME-IS	UNKNOW	IN):
Coa	1 fly a	ash &	cinders :	100%							
	· .										
		* *									



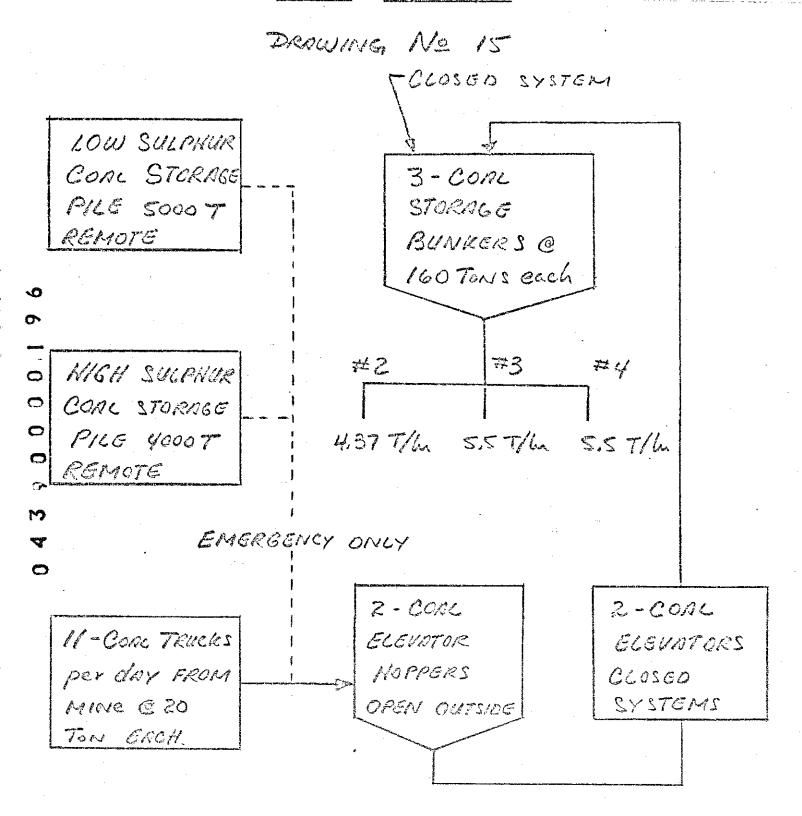
RICHARD B. OGILVIE, GOVERNOR
WILLIAM L. BLASER, DIRECTOR

Jo1	•	ATA AND INFORMATION FOR EXISTING EMISSION SOURCE Lant Coal Pile & Related	.coal		I.D. NO. PERMIT NO. DATE	FOR OFFICIAL USE ONLY
la.	NAME OF OWNER: Caterpi	llar Tractor Co.	16.	NAME OF OF	PERATOR: Cate	erpillar Tractor Co.
. Za.	STREET ADDRESS OF OWNER BOX 504		2b.	STREET ADD	DRESS OF OPERATOR Box	R: _504
3a.	CITY OF OWNER: Joliet		36.	CITY OF OF	PERATOR: Joli	iet
4a.	STATE OF OWNER: Illinois	4b. ZIP CODE: 60434	5a.	STATE OF C		5b. ZIP CODE: 60434
6.	NAME OF CORPORATE DIVISION OF	R PLANT (IF DIFFERENT FROM OWNER):		_		
7. Y	LOCATED WITHIN CITY LIMITS:	☐YES ☑NO	8.	STREET ADD	DRESS OF EMISSION	1 SOURCE:
9a.	CITY: Joliet	96. LOCATED WITHIN CITY LIMITS: ☐YES ☑NO	10:	COUNTY:	Wi11	11. ZIP CODE: 60434
2 0 0 0 0 ° × 4	IF "NO," STATE WHETHER THE ARE UNDERTAKE AND COMPLETE, WITHIN THIS INFORMATIONAL FORM: THE APPLICANT SHALL PROVIDE TO SHOW WHETHER OR NOT THE EMISSE OTHER SOURCES LOCATED AT THE POLLUTION. IN LIEU OF ONE OR MORE OF SUCE ENGINEERING STUDIES SUFFICIENTO SHOW WHETHER OR NOT THE EMISSE OF SHOW WHETHER OR NOT THE EMISSE OF SUCE TO SHOW WHETHER OR NOT THE EMISSE OF SUCH THE E	☐ NO PPLICANT HAD, ON OR BEFORE APRIL 14, IN A REASONABLE TIME, A CONTINUOUS PR ☐ YES ☐ NO	1972, E OGRAM O ORDANCE ION SOU ANT, CO HER STA F EMISS ALONE	NTERED INTO F CONSTRUCT WITH APPLI RCE, EITHER MPLY WITH A NDARD TEST! IONS OF COM OR IN COMBI	D A BINDING AGREE FION OR MODIFICAT CABLE REGULATION R ALONE OR IN COM APPLICABLE SUBSTA ING INFORMATION OF ITAMINANTS FROM IT INATION WITH CONT	FION OF THE EQUIPMENT DESCRIBED IN AS OF CHAPTER 2, AIR POLLUTION, WHICH ABINATION WITH CONTAMINANTS FROM ANTIVE REGULATIONS OF CHAPTER 2, AIR OR THE DETAILS AND RESULTS OF THIS EMISSION SOURCE AND FURTHER TAMINANTS FROM OTHER SOURCES

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<u>} 25</u> .	WAS	TE M	ATERI	ALS	FROM	1 MAI	NUFA	сти	RING	PRI	OCES	is:					\dashv	MAX.	IMUM	AMOUN	IT OF	WAST	E		\dashv	EST	IMAT	ED A	VERA	GE A	MOUNT	0F	
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1.0	. xo				OFFICIAL	RZE ONLY	, PERMIT APE	PLICATION NO.	5		
<u></u>				(FROM EMISSIO	EXHAUST GAS ON SOURCE TO	AMALYSIS D CONTROL EQUI	PMENT)				
NOTE	NOTE: IF THE EMISSION SOURCE WHICH IS THE SUBJECT OF THIS CONSTRUCTION PERMIT APPLICATION IS SERVED BY MORE THAN ONE EXHAUST STACK OR VENT, THE APPLICANT SHALL COMPLETE SEPARATE SHEETS FOR EACH SUCH STACK OR VENT.										
CONT	TAMINANT	CONCENTRATION	ENISSION	RATE'	метное	OF MEASURE AN	ID ANALYSIS	METHO	OD OF MONITORING		
28.	CARSON MONOXIDE	a. PPM	! b.	LB/HR	c.	2		d.			
29.	CARBON DIOXIDE	a. PPM	b.	LB/HR	ζ.			d.	• .		
30.	CHLORINE	a. PPM	ь.	LB/HR	c.			d.			
31.	HYDROCAR - BONS AS CH4	а. РРМ	b	LB/HR	c.			d.			
32.	HYDROGEN CHLORIDE	а. РРМ	b	LB/HR	c.			d.			
33.	HYDROGEN SULFIDE	a. PPM	b.	LB/HR	с.			d.			
34.	NITROGEN	а. РРМ	b.	LB/HR	с.			d.	A		
35.	NITROGEN OXIDES AS NO2	a. PPM	b.	LB/HR	с.	····		d. ·			
36.	SULFUR DIOXIDE	a. PPM	b.	LB/HR	c	· · · · · · · · · · · · · · · · · · ·		đ.			
37.	OTHER (SPECIFY)	a. PPM	b	LB/HR	c.			d.	,		
38.	PARTICULATE MATTER	a. GRAIN		LB/HR	c. F1101	tive dust	unobser	d.	ty line		
3	PARTICULATE	MATTER_COMPOSITI	 						EMICAL NAME IS UNKNOWN):		
0	•	Fugitive c	oal dust 10	00%.				•			
0											
NOTE	: THIS SECT	ION TO BE COMPLET	ED ONLY IF EMISS	IONS ARE EXH	AUSTED DIRE	CTLY TO THE AT	MOSPHERE WIT	THOUT ANY CONTROL EQU	JIPMENT:		
40.		NS ARE EXHAUSTED:	VENT 4	1. GAS EXIT	VELOCITY:		FPS 42	GAS EXIT TEMPERAT	URE: OF		
42-				AUTOMATIC	☐ BAR	OMETRIC [OTHER (SPE	CIFY)	1		
44.	DISTANCE OF OF THE APPL	THE STACK OR VEN	T FROM THE NEARE	ST PLANT BOU	NDRY FT.	15. HEIGHT OF	STACK OR VE	NT ABOVE GRADE:	FT.		
46,	HEIGHT OF S	TACK OR VENT ABOV	E ROOF:	······································	FT.	17. HEIGHT OF	TALLEST BUI	LDING WITHIN 150 FEE			
48.	YOUR DESIGN	ATION OF STACK:				19. AREA OF S	TACK OR VENT	AT EXIT:	FT ²		
50.		ATION, THE APPLIC						OR VENT SERVING THE CH SUCH INFORMATION	EQUIPMENT COVERED BY		
		R OF PAGES IN EXH	IBIT G: None	2							
51.	NITROGEN, A	NT SHALL SUBMIT AN NO HYDROCARBONS (A NT COVERED BY THIS	AS METHANE) EMIT	TED FROM ALL	SOURCES LO	CATED ON THE P	LANT OR PREM	ISES. INCLUDING THE	BON MONOXIDE, OXIDES OF EMISSIONS ESTIMATED FROM		
	MATERIAL		HOUR MAX. AMOUNT	1		ONE-HOUR MAX	1		ONE-HOUR MAX. AMOUNTS		
	PARTICULAT	E MATTER	<u>144.9</u> L	B SULFUR DIO	XIDE	149	6.8 LB MI	TROGEN OXIDES AS NO ₂	295.6 L3		
	HYDROCARBO	NS AS CHA	161.9 L	B CARBON MONO	DXIDE	22	2.9 L8	Chromic Oxide	1.87#		

FLOW DIAGRAM



BENUMONT BIRCH CORL HANDLING SYSTEM
BOILER HOUSE BLOG N

CATERPILLAR TRACTOR CO.

JANUARY 3, 1973



RICHARD 8. OGILVIE, GOVERNOR
WILLIAM L. BLASER, DIRECTOR

APPLICATION TO COPERATE		FOR	R UFFICIAL USE ONLY							
APPLICATION TO OPERATE DURING		I.D. NO.								
MALFUNCTIONS, BREAKDOWNS, OR STARTUPS		PERMIT NO.	0							
Joliet Plant Heating Plant		DATE								
1. NAME OF OWNER: Caterpillar Tractor Co.		ORATE DIVISION OR PI pillar Tracto	LANT (IF DIFFERENT FROM OWNER): Or Co.							
3. TELEPHONE NUMBER: 815-729-5511	4. TELEPHONE NI 815-7	MBER: 29-5511								
5. STREET ADDRESS OF OWNER: Box 504		ess of emission source aahon Road	SE:							
7. CITY: Joliet	8. CITY:	oliet	9. LOCATED WITHIN CITY LIMITS YES 125 NO							
10. STATE: 11. ZIP CODE: 60434	12. TOWNSHIP:	oliet	13. ZIP CODE: 60434							
The applicant shall submit the information requested in this emission standards, either alone or in combination with emiss premises of the applicant. 1. For each such emission source and directly related equipmed Exhibit E: (a) Describe the startup procedure. (b) State the types and quantities of emissions that may or included with this application: (c) Describe those procedures the arhicant will take dure (d) Describe the frequency and duration of startups. (e) Describe all measures the applicant will take to minimed to minimed the following and following and the following and following and the following and f	ions from other simil ent, submit the follow ccur during startup by ing startup to reduce mize the frequency and Section for each item which such operation w alone or in combinati	ar emission sources ving information and v completing Form API the emissions. i duration of startu of source equipment	attach to this application as C-96. (Total number of Forms APC- ps.							
 For each such 'emission source and directly related equipm application as Exhibit F: (a) State the type and quantity of emissions that may on Form APC-96. (Total number of forms APC-96 included the control of the control	cur during malfunctions that the second is second to the second is second to the second in the second is second in the second in	n or breakdown by co n: 3)	ompleting .							
Form APC-96. (Total number of forms APC-96 included with this application: 3) (b) Describe the extent to which discontinued operation of this equipment would: (A) cause or tend to cause injury to persons or severe damage to equipment; or (B) prevent the applicant from providing essential services to the public. (c) State the anticipated length of time the equipment will continue to operate during the malfunction or breakdown, including an explanation why this length of time is necessary. (d) Describe all measures the applicant will take to minimize the duration of a malfunction or breakdown. (e) Describe all measures the applicant will take to minimize the quantity of air contaminant emissions that may occur during a malfunction or breakdown.										

Total number of pages in Exhibit F:_

EXHIBIT E:

(a) COAL BOILER STARTUP PROCEDURE

Except in emergencies, boiler startups are always scheduled for second or third shifts, usually the latter part of the second shift. This practice has been developed primarily due to the fact that heaviest steam demand occurs at start of the first shift and particularly with coal boilers; several hours are usually required to adjust the boilers for the best operating conditions.

Normally, at least one boiler is kept in standby condition, filled with water and with available fuel supply ready to start in a minimum of time in event of an operating boiler failure. This boiler should have been previously hydrostatically tested at a minimum of 150 lbs. pressure.

NOTE: Boilers are normally started up twiceaa year except for malfunction, breakdown or extreme weather variation.

PREPARATION

- 1. Before lighting off the boiler, check operating condition of auxiliary equipment that serves firing or feeding the boiler; such as interlocks, automatic combustion controls, dampers, feedwater pumps and regulators, each pressure vessel, drums and headers, etc.
- 2. Check the position of all valves. All valves on blowdown lines, continuous blowdown, water column and gauge glass drains, and feedwater regulator should be closed. Open vent valves, water column shutoff valves, gauge glass shutoff valves, and steam pressure gauge valves.
- 3. Fill boiler and economizer with feedwater, which should be within 50 to 100 degrees F. of drum metal temperature, to about two inches below normal operating level. Be careful to feed slowly and vent fully to permit escape of steam or air.
- Blow down water column and gauge glass, making sure the water returns to proper level promptly.

- 5. Raising boiler pressure: During the first two hours, the stack will exceed the visual emission standard of 40% on the smoke density indicator. It takes 4 hours to bring the boiler to 150 psig.
 - A. Throughout firing up period, maintain normal water level. All firing equipment should be placed on hand control until the boiler has been placed on the line.
 - B. Use fire ignitor (napalm) and a thin layer of coal to light up the fire. Maintain fires at a rate which will raise boiler water temperature of 50 degrees F. per hour. When water temperature reaches the steaming point and all the air has been purged from the steam drum, throttle the drum vent and allow boiler pressure to rise at the rate between 5 to 10 psi per hour.
 - C. When pressure goes above atmospheric (about 25 psig), close the vent.
 - D. Open the drain between the non-return valve and the main stop valve early in the starting-up period, and at the same time, raise the non-return valve stem slightly to allow a gradual warming up of the steam line to the main stop valve while pressure is increasing.
 - E. When boiler pressure reaches about 90% of line pressure, open main stop valve after equalizing the steam lead to the header by use of the bypass around the main stop valve, and slowly open non-return valve allowing steam to flow through the gate valve bypass thus warming the line slowly. When line has been warmed and evidence of moisture has disappeared, slowly open the gate valve admitting full steam flow to the line. Gate valve bypass and drip valves should then be closed.
 - F. After the boiler has been placed on the line, close all drips and drum vents. Gradually increase boiler loading manually up to about

30% of rating, depending on control characteristics, and place on automatic control observing all the rules concerning controls operation. Before placing feedwater regulator in service, blow down the temperature element and allow the system to come to equilibrium.

- G. If boiler is being started up after repairs, check all gasketed joints and takeup after reaching working pressure and temperature.
- H. Safety valves should be checked by lifting off the seats with the hand level or raising pressure to the pop-off point.



RICHARD B. OGILVIE, GOVERNOR WILLIAM L. BLASER, DIRECTOR

EMISSIONS DURING MALFUNCTIONS, BREAKDOWN OR STA Joliet Hêating Plant Boilers No. 2						UP		I.D. NO. PERMIT NO. DATE	FOR OFFICIAL USE ONLY
1.	JOLIET NAME OF OWNER		- rai	ir porrers no	• 4		2. NAME OF CORPO		R PLANT (IF DIFFERENT FROM OWNER):
	Cater	oillar 1					<u> </u>		
3.	STREET ADDRESS Channa	s of EMISSI ahon Roa		CE:			4. CITY:	oliet	
NOTE				O COPIES OF THE EMIS					DRM APC-96.
				ANALYSIS OF	E XHAUST	GAS TO	THE AMBIENT AIR		
ଲ ବ	: IF THE EMI COMPLETE S	SSION SOURCEPARATE SHE	E WHICH	IS THE SUBJECT OF I	HIS APP VENT.		is served by more n of 3 stack		T STACK OR VENT, THE APPLICANT SHALL
رايسر	NTAMINANT	CONCENTRA	TION	EMISSION RATE		М	ETHOD OF MEASURE A	ND ANALYSIS	METHOD OF MONITORING
14.	CARBON MONOXIDE	a.	PPM	Unknown & b. variable	LB/HR	c.			d.
	CARBON DIOXIDE	a.	PPM	Unknown & ь. variable	LB/HR	c.			d.
,	CHLORINE	a.	PPM		LB/HR	c.			d, .
	HYDROCARBONS AS CH4	a.	РРМ	Unknown & b. variable	LB/HR	c.		·	d.
	HYDROGEN CHLORIDE	a.	PPM	b.	LB/HR	c.	·		d.
	HYDROGEN SULFIDE	a.	PPM	The state of the s	LB/HR	c.	<u> </u>	/	d.
20.	NITROGEN	a.	PPM	Unknown & b. variable	LB/HR	c.			d.
21.	NITROGEN OX- IDES AS NO ₂		PPM	Unknown & b. variable	LB/HR	c.	· · · · · · · · · · · · · · · · · · ·		d.
22.	SULFUR DIOXIDE	ā.	РРМ	Unknown & b. yariable	LB/HR				d.
23.	OTHER (SPECIFY)	a.Smoke	PPM		LB/HR	c. ma	n (wet coal)	or 3.0 (d)	rom a maximum of 4.0 Ring
	PARTICULATE MATTER	Est. M.	PPM	Est. Max* b403 gr/SCF	LB/HR	c. *E	stimate base	ed on corre	ation with Hayes smoke
25.	PARTICULATE IS UNKNOWN):				CENT BY	WEIGHT O	ensity meter FEACH COMPONENT (COMON NAME SHALI	only) L BE GIVEN IF CHEMICAL NAME
	······································	Coal	fly a	sh 100%					
36.	IF OTHER EMIT THIS APPLICA AS EXHIBIT G	TION, THE A	ES OR AI PPLICANT	IR POLLUTION CONTROL SHALL DEFINE THE E	EQUIPME MISSIONS	ENT ARE E 5 FROM SI	XHAUSTED THROUGH T CH OTHER EQUIPMENT	THE STACK OR VENT I AND ATTACH SUCH	SERVING THE EQUIPMENT COVERED BY INFORMATION TO THIS APPLICATION
	TOTAL NUMBER	OF PAGES I	N EXHIB	n Gr. None					



TOTAL NUMBER OF PAGES IN EXHIBIT G: None

STATE OF ILLINOIS ENVIRONMENTAL PROTECTION AGENCY DIVISION OF AIR POLLUTION CONTROL 2200 CHURCHILL ROAD SPRINGFIELD, ILLINOIS 62706

RICHARD B. OGILVIE, GOVERNOR WILLIAM L. BLASER, DIRECTOR

						1	EOD OF	FICIAL US	ב חיו ע		
			EMISSIONS DURING		•	7.5.110	1010	I I	L ONET		
		MALF	UNCTIONS, BREAKDOWN OR START	UP		I.D. NO.	L	<u> </u>			
					•	PERMIT NO.					
			Plant Boilers No.	3	DATE 2. NAME OF CORPORATE DIVISION OR PLANT (IF DIFFERENT FROM OWNER):						
١.	NAME OF OWNER	: aterpillar T	ractor Co		2. NAME OF CORP	ORATE DIVISION O	R PLANT (I	F DIFFEREN	IT FROM	WNER)):
3.		S OF EMISSION SOUR			4. CITY:						
	C]	hannahon Roa	d			Joliet					
NOT			NO COPIES OF THE EMISSION DU				ORM APC-96				
2			ANALYSIS OF EXHAUST	GAS TO T	HE AMBIENT AIR	:					
<u>ක</u> දා	E: IF THE EMI COMPLETE S	SSION SOURCE WHICH EPARATE SHEETS FOR	H IS THE SUBJECT OF THIS APPI REACH SUCH STACK OR VENT Ea	LICATION ch of	IS SERVED BY MORE 3 stacks id	THAN ONE EXHAUS	T STACK OR	VENT, THE	APPLIC	ANT SI	HALL
اکے	ONTAMINANT	CONCENTRATION	EMISSION RATE	ME.	THOD OF MEASURE A	ND ANALYSIS	ME	THOD OF MC	NITORIN	G	
14.	CARBON	nnu nnu	Unknown &					***			
15	MONOXIDE CARBON	a. PPM	b. variable LB/HR Unknown &	c.			d.				
	DIOXIDE	a. PPM	b. variable LB/HR	c.			d.				
	CHLORINE	2011									
	HYDROCARBONS	a. PPM	b. LS/HR Unknown &	с.			d.	 			
	AS CH4		b. variable LB/HR	ε.			d.				•
	HYDROGEN CHLORIDE	a. PPM	b. LB/HR	c.			d.				
	HYDROGEN SULFIDE	a. PPM	b. LB/HR	c.		w	d.				
20.		a. PPM	Unknown & LB/HR				d.				
21.	NITROGEN OX- IDES AS NO2		Unknown & LB/HR						·		
22.	SULFUR DIOXIDE		Unknown &	c.			d.				
23.	UTHER	a. Smoke PPM	4.0-3.0 Ringleman	Smok	e density d	ecreases fi	on a m	aximum	of 4	.0	
24.	PARTICULATE MATTER	Est. max *	Est. max *	+ o 1	leman (wet .5 Ringlema	m orross a /-	10 1		d.		
25.		MATTER COMPOSITION	b403 gr/SCF LB/HR . EXPRESSED AS PERCENT BY W	AETCH Jeb	imate based SitiXoMSERT(on correla	offX)	ith Har	yes si AL NAME	noke	<u>.</u>
		Coal fly a	sh 100%								
36.	IF OTHER EMISTHIS APPLICATAS EXHIBIT G.	JUN, THE APPLICANT	IR POLLUTION CONTROL EQUIPME F SHALL DEFINE THE EMISSIONS	NT ARE EX FROM SUC	HAUSTED THROUGH T H OTHER EQUIPMENT	HE STACK OR VENT AND ATTACH SUCH	SERVING T INFORMATI	HE EQUIPME ON TO THIS	NT COVE	RED B'	Y



TOTAL NUMBER OF PAGES IN EXHIBIT G:

STATE OF ILLINOIS ENVIRONMENTAL PROTECTION AGENCY DIVISION OF AIR POLLUTION CONTROL 2200 CHURCHILL ROAD SPRINGFIELD, ILLINOIS 62706

RICHARD B. OGILVIE, GOVERNOR
WILLIAM L. BLASER, DIRECTOR

					FOR OFFICIAL USE ONLY
		EMISSIONS DURIN	G	I.D. NO	o. [
	MAL	FUNCTIONS, BREAKDOWN	OR STARTUP		
T=12:5 T	adda a miasa	Doilona No. A		PERMIT	NU.
NAME OF OWNER		Boilers No. 4	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	ON OR PLANT (IF DIFFERENT FROM OWNER):
	lar Tractor	Co.		E. WASIE OF COMPONENTE DIFFEREN	or artificial (it sirrantina)
STREET ADDRES	S OF EMISSION SOL	IRCE:		4. CITY:	
Channahoi	n Road			Joliet	
				MALFUNCTIONS, BREAKDOWN, OR START THE ATTACHED PROCESS FLOW DIAGRAM.	UP FORM APC-96.
)		ANALYSIS OF	EXHAUST G	TO THE AMBIENT AIR	
TE: IF THE EM. COMPLETE:	ISSION SOURCE WHI SEPARATE SHEETS F	CH IS THE SUBJECT OF OR EACH SUCH STACK OR		ATION IS SERVED BY MORE THAN ONE EX ach of 3 stacks identic	(HAUST STACK OR VENT, THE APPLICANT SHAL
SONTAMINANT	CONCENTRATION	EMISSION RATE	:	METHOD OF MEASURE AND ANALYSIS	METHOD OF MONITORING
CARBON MONOXIDE	a. PP	Unknown & b. variable	LB/HR c		d.
CARBON DIOXIDE	a. PP	Unknown & variable	LB/HR c		d.
			LB/HR c		d.
5. CHLORINE	a. PPI	4 5.			
7. HYDROCARBON:	S	Unknown &			d.
NHYDROCARBONS AS CH4 HYDROGEN	s a. pp	Unknown & b. variable	LB/HR c		d.
HYDROCARBONS AS CH4 HYDROGEN CHLORIDE HYDROGEN	a. PPI	Unknown & b. variable	£B/HR c		d.
HYDROCARBONS AS CH4 HYDROGEN CHLORIDE HYDROGEN SULFIDE NITROGEN	a. PPI	Unknown & b. variable b. b. Unknown &	LB/HR c		
HYDROCARBONS AS CH4 HYDROGEN CHLORIDE HYDROGEN SULFIDE NITROGEN NITROGEN OX-	a. PPI a. PPI a. PPI	Unknown & b. variable b. Unknown & b. variable Unknown & Unknown &	LB/HR C LB/HR C LB/HR C		d. d.
HYDROCARBONS AS CH4 HYDROGEN CHLORIDE HYDROGEN SULFIDE NITROGEN NITROGEN LIDES AS NO2 SULFUR	a. PPI a. PPI a. PPI a. PPI a. PPI	Unknown & b. variable b. Unknown & b. variable Unknown & b. variable Unknown & b. variable Unknown &	LB/HR C LB/HR C LB/HR C LB/HR C		d. d. d.
HYDROCARBONS AS CH4 HYDROGEN CHLORIDE HYDROGEN SULFIDE NITROGEN NITROGEN NITROGEN SULFUR DIOXIDE OTHER	a. PPI a. PPI a. PPI a. PPI Smoke	Unknown & b. variable 4.0-3.0 Ring	LB/HR c	Smoke density decreases	d. d. d. d. d. d. from a maximum of 4.0
HYDROCARBON: AS CH4 HYDROGEN CHLORIDE HYDROGEN SULFIDE NITROGEN NITROGEN SULFIDE NITROGEN OXIDES AS NO2 SULFUR DIOXIDE OTHER (SPECIFY) PARTICULATE MATTER	a. PPI a. PPI a. PPI a. PPI a. PPI a. PPI Est max *	Unknown & b. variable b. Unknown & b. variable Unknown & b. variable Unknown & b. variable Unknown & b. variable 4.0-3.0 Ring b. Max Est max *	LB/HR c	<u>Ringelmann (wet coal) c</u> to 1.5 Ringelmann over *Estimate based on corr	d. d. d. d. d. d. s from a maximum of 4.0 or 34.0 (dry coal) a 2.0 hour period. celation with Hayes smoke
7. HYDROCARBON: 7. AS CH4 8. HYDROGEN 6. CHLORIDE 9. HYDROGEN 8. SULFIDE 9. NITROGEN 1. NITROGEN 1. NITROGEN 2. SULFUR DIOXIDE 3. OTHER (SPECIFY) 4. PARTICULATE MATTER	a. PPI a. PPI a. PPI a. PPI a. PPI a. PPI Smoke a. PP Est max * a. 770 PPI	Unknown & b. variable b. Unknown & b. variable Unknown & b. variable Unknown & b. variable Unknown & b. variable 4.0-3.0 Ring b. Max Est max *	LB/HR c	<u>Ringelmann (wet coal) c</u> to I.5 Ringelmann over	d. d. d. d. d. d. s from a maximum of 4.0 or 34.0 (dry coal) a 2.0 hour period. celation with Hayes smoke

- (C) Fuel and air are manually controlled and closely watched so as not to heat the boiler up too fast causing boiler damage but by the same token attempting to minimize smoking as much as possible.
- (D) Each boiler is started up approximately (6) to (8) times per year.

 Most startups require approximately a (4) hour or less period.

 However, on occasion, it will take approximately six (6) hours to properly bring the boiler on line.
- (E) The boiler is shut down and started only because of breakdown or drastically changing weather conditions requiring major changes in heating plant load.



RICHARD B. OGILVIE, GOVERNOR
WILLIAM L. BLASER, DIRECTOR

EVUTDI.	l f					·		
(a)						FOR OFFICIAL USE ONLY		
` .		EMISSIONS DURING			I.D. NO.			
	MALFU	JNCTIONS, BREAKDOWN OR START	UP		PERMIT NO.			
Taldak Dia	st Hootine D	lamb Dailam #2			DATE			
JOILET PLAT 1. NAME OF OWNER	nt Heating P	lant Boiler #2				PLANT (IF DIFFERENT FROM OWNER):		
	illar Tracto			Caterpillar Tractor Co.				
	s of emission sour non Road	CE:		4. CITY: Joliet				
				1				
NOTE: 1. APPLIC	ANT MUST SUBMIT TW	O COPIES OF THE EMISSION DU	RING MALF	UNCTIONS, BREAKDOWN	, OR STARTUP FO	ORM APC-96.		
2. EACH S	UCH EMISSION SOURC	E SHALL BE CLEARLY LABELED	ON THE AT	TACHED PROCESS FLOW	DIAGRAM.			
				•		·		
					<u>,</u>			
រោ		ANALYSIS OF EXHAUST	GAS TO T	HE AMBIENT AIR				
OF IF THE EMI	SSION SOURCE WHICH	I IS THE SUBJECT OF THIS APP	LICATION	IS SERVED BY MORE TH	HAN ONE EXHAUST	STACK OR VENT, THE APPLICANT SHALL		
COMPLETE S	EPARATE SHEETS FOR	EACH SUCH STACK OR VENT.				•		
<u> </u>								
CONTAMINANT	CONCENTRATION	EMISSION RATE	ME	THOD OF MEASURE AND	ANALYSIS	METHOD OF MONITORING		
14. CARBON	a. PPM	Unknown & b. variable LB/HR		•		d.		
MONOXIDE 15. CARBON	a. PPM	Unknown &				<u>. </u>		
O DIOXIDE 1	a. PPM	b. variable LB/HR	c.			d.		
16. CHLORINE	a. PPM	b. LB/HR	 -			d.		
17. HYDROCARBONS		Unknown &						
AS CH4	a. PPM	b. variable LB/HR	с.			d.		
18. HYDROGEN CHLORIDE	a. PPM	b. LB/HR	c.			d.		
19. HYDROGEN								
SULFIDE	a. PPM	b. LB/HR	c			d. ·		
20. NITROGEN	a. PPM		<u>c.</u>			d.		
21. NITROGEN OX- IDES AS NO ₂	а РРМ	Unknown & LB/HR				d.		
22. SULFUR	a. PPM		c.			u.		
DIOXIDE	a. PPM		c. Cal	iculated U.S.	AP-42	d.		
23. OTHER	Smoke	3.0 - 5.0 b.Ringelmann LB/HR	Hav	yes smoke met	er	d.		
(SPECIFY) 24. PARTICULATE	Est. 565 to		,	timate correl				
MATTER	а. 960 РРМ	(c. smo	oke density f	rom Lear-	degler tests.		
25. PARTICULATE IS UNKNOWN):	MATTER COMPOSITION	. EXPRESSED AS PERCENT BY	WEIGHT OF	EACH COMPONENT (COM	MON NAME SHALL	BE GIVEN IF CHEMICAL NAME		

36. IF OTHER EMISSION SOURCES OR AIR POLLUTION CONTROL EQUIPMENT ARE EXHAUSTED THROUGH THE STACK OR VENT SERVING THE EQUIPMENT COVERED BY THIS APPLICATION, THE APPLICANT SHALL DEFINE THE EMISSIONS FROM SUCH OTHER EQUIPMENT AND ATTACH SUCH INFORMATION TO THIS APPLICATION AS EXHIBIT G.

	*****	~-				-	None	
IMM	NUMBER	131-	PAGES	N.	EXHIBIT	19:	.110116	

Coal flyash & fines 100%.



RICHARD B. OGILVIE, GOVERNOR WILLIAM L. BLASER, DIRECTOR

	 								FOR OFFICIAL USE ONLY			
			KAI FI	EMISSIONS DURING INCTIONS, BREAKDOWN OF	C CT A DT	I : D	·	I.D. NO.				
	Joliet			ng Plant Boile		ur	•	PERMIT NO. DATE				
1.	NAME OF OWNER		-	ig tranc porre	L # J		2. NAME OF CORPORATE DIVISION OR PLANT (IF DIFFERENT FROM OWNER):					
	Caterpi	11ar Tra	ctoi	· Co.			Caterpillar Tractor Co.					
3.	STREET ADDRES	S OF EMISSION	SOUR	CE:			4. CITY:					
	Channal	on Road										
NOTE							MALFUNCTIONS, BREAKDO		FORM APC-96.			
9				ANALYSIS OF E	XHAUST	GAS	TO THE AMBIENT AIR					
™ E	: IF THE EMI COMPLETE S	SSION SOURCE EPARATE SHEET	WHICH S FOR	IS THE SUBJECT OF TH EACH SUCH STACK OR V	IS APP ENT.	LICAT	ION IS SERVED BY MORE	THAN ONE EXHAUS	ST STACK OR VENT, THE APPLICANT SHALL			
 co	NTAMINANT	CONCENTRATI	ON	EMISSION RATE			METHOD OF MEASURE A	AN AN AN AN AN AN	METHOD OF MONITORING			
	CARBON			Unknown &			THE THOU OF THE POOR OF	NAME TO TO	NETHOD OF PIONITURING			
	MONOXIDE	a.	PPM	•••	LB/HR	c.			d.			
	CARBON	_	DDM	Unknown &	. 5 0		•					
<u>C</u>	DIOXIDE 2	a	PPM	b. variable	LB/HR	С.			d.			
Ö	CHLORINE	a.	РРМ	b. I	LB/HR	c.			d.			
	HYDROCARBONS			Unknown &	· · · · · · · · · · · · · · · · · · ·							
	AS CH4	a	PPM	b. variable	LB/HR	c.			d.			
18,	HYDROGEN CHLORIDE	a	РРМ	b. 1	LB/HR	l c.			d.			
19.	HYDROGEN SULFIDE	a.	PPM		LB/HR				d.			
	NITROGEN											
21.	NITROGEN OX-	a.	PPM	Unknown &	LB/HR		-		d.			
22.	SULFUR DIOXIDE	a.	PPM PPM		LB/HR LB/HR	c.	Calculated U.	C AD 4.2	d.			
23.	OTHER (SPECIFY)	Smoke	ррм	3.0 - 5.0 b.DRingelmann			Hayes Smoke M	· · · · · · · · · · · · · · · · · · ·	10.			
24.	PARTICULATE MATTER	Est 565	to PPM	Est. max			Estimate corr	elating par	rticulate to smoke ex tests.			
25.												

36. IF OTHER EMISSION SOURCES OR AIR POLLUTION CONTROL EQUIPMENT ARE EXHAUSTED THROUGH THE STACK OR VENT SERVING THE EQUIPMENT COVERED BY THIS APPLICATION, THE APPLICANT SHALL DEFINE THE EMISSIONS FROM SUCH OTHER EQUIPMENT AND ATTACH SUCH INFORMATION TO THIS APPLICATION AS EXHIBIT G.

TOTAL NUMBER OF PAGES IN EXHIBIT G: None





RICHARD B. OGILVIE, GOVERNOR
WILLIAM L. BLASER, DIRECTOR

							FOR OFFICIAL USE ONLY		
.*	MALFU	EMISSIONS DURING INCTIONS, BREAKDOWN O	R STARTU	ΙP		I.D. NO. PERMIT NO.			
Joli	et Plant Heat	ing Plant Boil	er #4	·	DATE				
. NAME OF OWN Cate	rpillar Tracto	or Co.			Caterpi:	2. NAME OF CORPORATE DIVISION OR PLANT (IF DIFFERENT FROM OWNER): Caterpillar Tractor Co.			
	RESS OF EMISSION SOUR nahon Road	CE:	····		4. CITY: Joliet				
					MALFUNCTIONS, BREAKDON		JRM APC-96.		
<u> </u>		ANALYSIS OF	E XHAUST	GAS	TO THE AMBIENT AIR				
NOTE: IF THE COMPLET	EMISSION SOURCE WHICH E SEPARATE SHEETS FOR	IS THE SUBJECT OF THE EACH SUCH STACK OR	HIS APPL VENT.	.ICAT:	ION IS SERVED BY MORE	THAN ONE EXHAUST	T STACK OR VENT, THE APPLICANT SHALL		
CONTAMINANT	CONCENTRATION	EMISSION RATE			METHOD OF MEASURE A	ND ANALYSIS	METHOD OF MONITORING		
14. CARBON MONOXIDE	a. PPM	Unknown & b. variable	LB/HR	c.			d.		
15. CARBON DIOXIDE	a. PPM	Unknown & b. variable	LB/HR	с.			d.		
16. CHLORINE	a. PPM	b	LB/HR	c.			d.		
17. HYDROCARB	ons a. PPM	Unknown & b. variable	LB/HR	c.	·		d.		
18. HYDROGEN CHLORIDE	a. PPM	b	LB/HR	c.		<i>:</i> .	d		
19. HYDROGEN SULFIDE	a. PPM	b	LB/HR	c.		14	d.		
20. NITROGEN	a. PPM	b	LB/HR	c.			d.		
21. NITROGEN IDES AS N		Unknown & b. variable	LB/HR	c.			d.		
22. SULFUR DIOXIDE		5. 540 3.0 - 5.0	LB/HR	c.	Calculated U.S	AP - 42	d.		
23. OTHER (SPECIFY)		b. Ringelmann	LB/HR	c.	Hayes smoke	meter	d. ticulate to smoke density		
24. PARTICULA MATTER	a. 960 ppm	Est. max b. 96		с.	from Lear-Sieg	ler tests.	d.		
25. PARTICULA IS UNKNO	ATE MATTER COMPOSITIO	N. EXPRESSED AS PERC	ENT BY	WE I GH	IT OF EACH COMPONENT	COMMON NAME SHAL	L BE GIVEN IF CHEMICAL NAME		

Coal fly ash & fines 100%.

36.	IF OTHER EMISSION SOURCES OR AIR POLLUTION CONTROL EQUIPMENT ARE EXHAUSTED THROUGH THE STACK OR VENT SERVING THE THIS APPLICATION, THE APPLICANT SHALL DEFINE THE EMISSIONS FROM SUCH OTHER EQUIPMENT AND ATTACH SUCH INFORMATION	EQUIPMENT C TO THIS APP	OVERED BY LICATION
	AS EXHIBIT G.		

				~	EVUIDIT	Α.	None	
TOTAL	NUMBER	OF	PAGES	iΝ	EXHIBIT	Ŀ.	NOLL	

EXHIBIT F (Continued)

(b) Short term steam and heat loss will cause immediate freezing and resulting freeze damage to the heating and ventilating intake coils on top of the filant manufacturing buildings.

Long term loss of steam and heat will again cause roof top heating and ventilating coil damage. It will also cause:

- 1. Interruption of manufacturing operations and economic loss due to the loss of process steam, interruption of cafeteria food service for employees, and 6000 uncomfortable and unhappy employees complaining of lack of heat and loss of food service.
- General freeze damage will occur to manufacturing facilities and equipment.

(c)	Malfunction or Breakdown	Expected Duration	Expected Smoke (Ringelmann)	Expected SO ₂ Removal
	Power failure	10 min.	3 - 4	Temporary interruption (after 1974)
	Stoker pin failure	10 min.	3 - 4	N/A
	I.D. Fan failure	15 min.	3 - 4	None (after 1974)
	F.D. Fan failure	15 min.	4 - 5	N/A
	Overfire fan failure	5 min.	2 - 3	N/A
	Gas boiler major failure	1 hour	5 max.	N/A
	Proposed SO ₂ scrubber and/or and/or chemical plant failure Boilers No. 2 & 3 (1974 & later)	Unknown (Hrs to days?)	2.0 max	None (after 1974)
	Promosed combination coal & gas fired Boiler No. 4 major failure to gas firing equipment (fall 1973 and later)	Unknown (Hrs to days?)	2.0 max	None
	Soot blowing (to 1974)	2/day @ 5 min	ea 4.3 max	N/A

(d & e)

MALFUNCTION AND BREAKDOWN

The following malfunction and breakdown incidents will violate the visual particulate and SO_2 emission standards at times until normal operation can be resumed.

POWER FAILURE

- 1. The two (2) Caterpillar Diesel Electric Sets are automatically started when normal power fails.
- 2. Maintain normal water operating level.
- 3. Manuallý restart the I.D. Fan, F.D. fan, overfire fan and other auxiliary equipment.

NOTE: Each diesel electric set can only handle two boilers at the same time.

The 379 Diesel serves Substation #6 (#1 and #2 Boilers, #1 and #2

Compressors, & auxiliary boiler room equipment). The 398 Diesel serves

Substation #11 (#3 & #4 Boilers, and #1 deep well).

BOILER EMERGENCIES

In the event of a major failure of equipment such as fans, stokers, etc., the boiler must be immediately shut down and steps taken to start the standby boiler.

I.D. Fan, F.D. Fan and Overfire Fan Failure

- A. When any of the above fans fail, remove boiler from the line per shutdown procedure.
- B. Reduce load as soon as possible.
- C. Start up another boiler, if available.
- D. Repair fans and start up again if the boiler is needed.

Stoker Breakdown

Repair with boiler on the line, if possible.

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2. In the event of <u>any</u> operating problem that would cause excess smoke, the boiler must be shut down within five minutes if the trouble cannot be corrected.

Boiler Tube Failure

- 1. Stop fuel feed and combustion air.
- 2. Keep the I.D. fan in operation.
- 3. Continue to feed water to boiler if possible to do so without drawing too heavily on the feed water supply to the point other boilers would be endangered.
- 4. Shut off feed water supply to boiler soon as it has cooled down enough to prevent any further damage.
- 5. In the event of low water in the boiler, not visible in gauge glass, take immediate steps to shut boiler down.

Major Steam Leaks

1. In the event of a major break in main steam lines anywhere in the plant and the steam load begins to exceed the capacity of the boilers, to the point where proper combustion of smoke could not be controlled, then take steps to close the main steam line header to the section of plant involved.

Boiler Grate Operation

- Do not ever use a heavier shear pin than we are now using.
- 2. At the present time we feel that the alarm-stop switches are set properly. Do not adjust them except for a very good reason and report any adjustment made to your supervisor.

- 3. During operations if the grates should become stalled and the alarm switch stops the grates or a pin shears, use the following procedure:
 - a. Increase the air flow to keep the grates cool while stalled.
 - b. Allow the ash bed to build up to help keep the grates cool.
 - c. Slack off on the fuel feed as much as possible.
 - d. Try reversing the grates not more than three or four inches then try running the grates forward. If grates cannot be made to
 operate freely within an hour or if grates start to heat red, then
 kill the fire and put another boiler on the line.
 - e. Continue air flow through stalled grates.
- 4. In the event of a stalled grate, immediately start making preparations to put another boiler on the line if the grate cannot be cleared. This would save an hour of time.

Bunker Fire

- 1. Run hot coal through the stokers as soon as possible.
- 2. Empty the entire bunker outside on the ground. Hose coal down as the bunker empties.

Proposed SO₂ Scrubber Breakdown (early 1974)

The SO₂ Scrubber will be bypassed until the scrubber and/or chemical treatment plant malfunction can be repaired and returned to service. It is anticipated that repairs will be made as soon as possible and every effort will be made to keep this experimental full scale pilot plant scrubber and chemical plant system in service.

Proposed Combination Fuel Boiler #4 (Fall 1973)

When and if a major malfunction of the gas firing equipment occurs, it is anticipated that the boiler will be operated on 100% coal. Every effort will be made to repair the gas firing equipment and return it to service as quickly as possible.



RICHARD B. OGILVIE, GOVERNOR william L. BLASER, DIRECTOR

		÷		I.D. NO.	
	COMPLIANCE PLAN Joliet Plant Heating Plant Boile	ers #2 & #3	<u>-</u>	PERMIT NO. DATE	0
1.	NAME OF OWNER: Caterpillar Tractor Co.		7. NAME OF CORPO	orate division or p rpillar Trac	LANT (IF DIFFERENT FROM OWNER): tor Co.
2.	TELEPHONE NUMBER: 815-729-5511		8. TELEPHONE MUI	759-5511	
3.	STREET ADDRESS OF OWNER: Box 504			ss of EMISSION SOUR Inahon Road	CE:
4.	CITY: Joliet		10. CITY: . Jo1	.iet	11. LOCATED WITHIN CITY LIMITS ☐ YES ☑ YES
5. •••	STATE: 6. ZIP CODE:		12. COUNTY: Wi	11	13. ZIP CODE: 60434
-	THE UNDERSIGNED HEREBY FILES THIS COMPLIANCE STATEMENTS CONTAINED HEREIN ARE TRUE AND CORF				
	REFERENCED IN THIS APPLICATION REMAINS TRUE, OF THE PROGRAM DESCRIBED IN THIS COMPLIANCE :	CORRECT AND CURP	RENT. THE UNDERS	IGNED APPROVES EACH	AND EVERY PROVISION
0	OWNER (IF INDIVIDUAL)		(OWNER (IF CORPORATI	ON OR PARTNERSHIP)
		•	Cater	pillar Tract	or Co. 1-29-73
C	SIGNATURE DATE		EXACT	CORPORATE OR PARTN	ERSHIP NAME DATE
C			Min		Vice-President
C		٠.		TURE OF OFFICER	TITLE OF OFFICER
×	A CORPORATE OWNER MUST HAVE ON FILE WITH THE THE OFFICER SIGNING THE APPLICATION TO EXECUT AND OPERATION OF THE EQUIPMENT TO BE COVERED	E THIS COMPLIAN	IED COPY OF A RESI CE PLAN, AND TO C	OLUTION OF ITS BOAR AUSE OR ALLOW THE C	D OF DIRECTORS AUTHORIZING ONSTRUCTION, MODIFICATION
	<u> </u>				•

THIS PERMIT APPLICATION CONSISTS OF APPLICATION FORMS AND OTHER EXHIBITS LISTED BY TITLE AND NUMBER OF PAGES BELOW.

APC-95 1 copy 2 pages Boiler Nos. 2 & 3

APC-61 2 copies 4 pages each SO₂ & Particulate Scrubbers

APC-103 1 copy 5 pages SO_2 & Particulate Scrubbers Sludge Disposal APC-98 1 copy 1 page SO_2 & Particulate Scrubbers

Addendum A 1 copy 1 page SO2 & Particulate Scrubbers

Flow Diagram & Drawings 1 copy 12 pages SO_2 Scrubbing System Boilers #2 & #3

		• • • • • • • • • • • • • • • • • • • •
14.	equipme include	licant shall submit a process flow diagram depicting all emission sources and all air pollution control ont covered by this Compliance Plan and related Operating Permit application. The diagram shall labels for each source and equipment, and shall set forth maximum flow rates for (1) all process ont, (2) all air pollution control equipment, (3) all emission sources and (4) all stacks and vents.
	need no	s information has been previously submitted with the Operating Permit application, the applicant t resubmit the diagram but may reference appropriate drawing number(s)). C26430 Sheet 1, 2, 3, 5, 8
	Number	of sheets: 14 Drawing Number(s): 11, 12, C2637 C26939 Sheet 1, 2, 3, 4, 5, 6
15.	mation and eng in the shall b	licant shall submit a detailed description of the equipment he proposes to install to comply with the mental Protection Act and applicable substantive Regulations. This description shall include inforact to the technical reasonableness of the proposed air pollution control equipment or control techniques, intering reports or studies sufficient to prove that the installation of this equipment will result operation being in compliance with the Act and applicable substantive Regulations. This equipment e accurately and clearly labeled on the process flow diagram. Detailed information for each item of nt shall be submitted in one of the following three ways:
		If the applicant has entered into a binding agreement or contractural obligation to purchase specific items of equipment, he shall complete applicable Construction Permit application forms, and shall note on page one (!) of such forms "This equipment is purchased, but not installed, as part of our Compliance Plan for the operation, and is indicated on drawing (complete as necessary)." The applicant shall submit a list of those forms so marked and attach to this Plan as Exhibit N. Construction permit CE 72 013 granted 2/17/72 Total number of pages in Exhibit N: Extension applied for attached. 25 pages
	(b)	If the applicant has selected but not entered into a binding agreement or contracturual obligation to purchase specific items of equipment, he shall complete applicable Construction Permit application forms and shall note on page (1) of such forms "This equipment is to be purchased and installed as part of our Compliance Plan for this operation and is indicated on drawing (complete as necessary) as item (complete as necessary)." The applicant shall submit a list of those forms so marked and attach to this Plan as Exhibit P.
		Total number of pages in Exhibit P: None
	(c) ·	If the applicant has selected the type of air pollution control equipment or control techniques but has not selected specific items of equipment, he shall (A) submit performance specifications which detail the performance of the equipment to be procured; (B) provide a test plan which will detail how the equipment, purchased pursuant to a given specification, will be tested to prove that the equipment meets the applicable performance specifications; and (C) attach this information to this Plan as Exhibit Q.
	,	Total number of pages in Exhibit Q: None
conti	rol equi	licant shall submit a Project Completion Schedule (Form APC-98) for each item of air pollution pment or control technique. The final compliance date of such Project Completion Schedule shall than the applicable date described in Chapter 2: Air Pollution.
Tota	l number	of Forms APC-98 submitted with this application:

C

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RICHARD B. OGILVIE, GOVERNOR WILLIAM L. BLASER, DIRECTOR

					-	
	Joliet Plant Heating Plant			I.D. NO.		
	Joliet Plant Heating Plant Boiler No. 4 Gas Conversion			PERMIT NO. DATE	o C	
ī.	NAME OF OWNER: Caterbillar Tractor Co.		7. NAME OF CORP Cate:	ORATE DIVISION OR PL rpillar Tract	ANT (IF DIFFERE!	IT FROM OWNER):
2.	TELEPHONE NUMBER: 815-729-5511	-	8. TELEPHONE NU 815-			
3.	STREET ACCRESS OF CHINER: Box 504		9. STREET ADDRE	SS OF EMISSION SOURCE		
	CITY: Joliet		10. CITY: Joli	et	1. LOCATED WITH	
5.	STATE: 6. ZIP CODE: 60434		12. COUNTY: Will		3. ZIP CODE:	60434
ς	STATEMENTS CONTAINED HEREIN ARE TRUE AND CUR REFERENCED IN THIS APPLICATION REMAINS TRUE, OF THE PROGRAM DESCRIBED IN THIS COMPLIANCE OWNER (IF INDIVIDUAL)	PLAN AND RELATED	PROJECT COMPLET	ION SCHEDULES. OWNER (IF CORPORATI		
- 5	OWNER (IF INDIVIDUAL)			OWNER (IF CORPORATI	ON OR PARTNERSHI	P)
,			•	terpillar Tra		1-29-73
(SIGNATURE DA	TE	EXAC 21	T CORPORATE OR PARTN	ERSHIP NAME	DATE
į	YOUR IDENTIFICATION NUMBER (OPTIONAL)		SIGN	ATURE OF OFFICER	TITLE OF	
	Cya,	E AGENCY A CERTI	FIED COPY OF A RE	SOLUTION OF ITS BOAR	D OF DIRECTORS A	AUTHORIZING MIFICATION
1	A CORPORATE OWNER MUST HAVE ON FILE WITH THE THE OFFICER SIGNING THE APPLICATION TO EXEC AND OPERATION OF THE EQUIPMENT TO BE COVERE	DIF THIS COMPLIYE	NUE PLAN, AND TO	CAUSE OR RELOW THE	ONSTRUCTION TO	*.

THIS PERMIT APPLICATION CONSISTS OF APPLICATION FORMS AND OTHER EXHIBITS LISTED BY TITLE AND NUMBER OF PAGES BELOW.

APC-95	T copy	2 pages	Boiler	No.	4 Gas	Conversion
APC-85	1 copy	3 pages	Boiler	No.	4 Gas	Conversion
APC-62	1 conv	3 pages	Boiler	No.	4 Gas	Conversion
APC-98	1 copy	1 page	Boiler	No.	4 Gas	Conversion

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14.	The applicant shall submit a process flow diagram depicting all emission sources and all air pollution control equipment covered by this Compliance Plan and related Operating Permit application. The diagram shall include labels for each source and equipment, and shall set forth maximum flow rates for (1) all process equipment, (2) all air pollution control equipment, (3) all emission sources and (4) all stacks and vents.
	(If this information has been previously submitted with the Operating Permit application, the applicant need not resummit the diagram but may reference appropriate drawing number(s)).
	Number of sheets: 1 Drawing Number(s): 13
15.	The applicant shall submit a detailed description of the equipment he proposes to install to comply with the Environmental Protection Act and applicable substantive Regulations. This description shall include information as to the technical reasonableness of the proposed air pollution control equipment or control techniques, and engineering reports or studies sufficient to prove that the installation of this equipment will result in the operation being in compliance with the Act and applicable substantive Regulations. This equipment shall be accurately and clearly labeled on the process flow diagram. Detailed information for each item of equipment shall be submitted in one of the following three ways:
· ·	(a) If the applicant has entered into a binding agreement or contractural obligation to purchase specific items of equipment, he shall complete applicable Construction Permit application farms, and shall note on page one (1) of such forms "This equipment is purchased, but not installed, as pare of our Compliance Plan for the operation, and is indicated on drawing (complete as necessary) as item (complete as necessary)." The applicant shall submit a list of those forms so marked and attach to this Plan as Exhibit N.
	Total number of pages in Exhibit N: None
	(b) If the applicant has selected but not entered into a binding agreement or contracturual obligation to purchase specific items of equipment, he shall complete applicable Construction Permit application forms and shall note on page (1) of such forms "This equipment is to be purchased and installed as part of our Compliance Plan for this operation and is indicated on drawing (complete as necessary) as item (complete as necessary)." The applicant shall submit a list of those forms so marked and attach to this Plan as Exhibit P.
÷.	Total number of pages in Exhibit P:
	(c) If the applicant has selected the type of air pollution control equipment or control techniques but has not selected specific items of equipment, he shall (A) submit performance specifications which detail the performance of the equipment to be procured; (B) provide a test plan which will detail how the equipment, purchased pursuant to a given specification, will be tested to prove that the equipment meets the applicable performance specifications; and (C) attach this information to this Plan as Exhibit Q.
	Total number of pages in Exhibit Q: None
cont	The applicant shall submit a Project Completion Schedule (Form APC-98) for each item of air pollution trol equipment or control technique. The final compliance date of such Project Completion Schedule shall no later than the applicable date described in Chapter 2: Air Pollution.
Tota	al number of Forms APC-98 submitted with this application:

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RICHARD B. OGILYIE, GOVERNOR
WILLIAM L. BLASER, DIRECTOR

Joliet Plant Heating Plant Boiler No. 4 Gas Conversion DATE					
ncom	NO.				
Joliet Plant Heating Plant Boiler No. 4 Gas Conversion DATE	0				
Caterpillar Tractor Co. Caterpilla	DIVISION OR PLANT (IF DIFFERENT FROM OWNER): ar Tractor Co.				
STREET ADDRESS OF EMISSION SQURCE: Channahon Road 4. CITY: Joliet					
R. F. Vonachen 6. SIGNATURE:	Vonacken				
TUUR IDENTIFICATION NUMBER: 8. DATE THIS FORM 98 (OPTIONAL)	PREPAREU: 1-10-73				
OPERATING PERMIT NUMBER: 10. CONSTRUCTION PERMITS (IF AVAILABLE)	MIT NUMBER:				
THIS FORM MUST BE COMPLETED FOR EACH ITEM OF EQUIPMENT TO BE CO IN ACCORDANCE WITH A COMPLIANCE PLAN.	ONSTRUCTED OR MODIFIED				
6. DESCRIBE THE ITEM OF EQUIPMENT TO BE CONSTRUCTED OR MODIFIED:					
Existing coal fired boiler No. 4 at the Joliet Heating Plant is to be converted to natural gas in stages according to available natural gas commitments. Stage (1) calls of conversion of 2/3 boiler capacity to natural gas during 1973 to take advantage of 20,000 therm commitment. The boiler will be operated as a combination fuel source until enough natural gas is available by 1975 to operate it completely on natural gas or with natural gas and low sulfur coal with an additional scrubber if necessary.					
2. IDENTIFY THE LABEL OF THIS ITEM OF EQUIPMENT AS GIVEN ON THE APPROPRIATE PROCESS FLOW DIAG Gas conversion Drawing No. 13	GRAM:				
ESTIMATED ACTUAL S N/A ESTIMATED	COST (EQUIPMENT PLUS INSTALLATION): ACTUAL \$ N/A				
5. COMPLETE ALL OF THE FOLLOWING INFORMATION IN COLUMNS A AND B. COMPLETE COLUMN C AS APPLIA	_				
A. EXPECTED DATE ACTIVITY WILL BE COMPLETED TO PURCHASE OR MODIFY THIS ITEM OF EQUIPMENT. A. EXPECTED DATE ACTIVITY WILL BE COMPLETED 2-1-73	B. C. LATEST DATE ACTUAL DATE ACTIVITY WILL ACTIVITY WAS BE COMPLETED COMPLETED				
b. STATE DATE THE APPLICANT WILL APPLY FOR A CONSTRUCTION PERMIT FOR THIS ITEM OF EQUIPMENT OR MODIFICATION OF EQUIPMENT. 2-1-73					
ECUIPMENT IS TO BE MODIFIED, STATE WHEN SUCH MODIFICATION SHALL 4-1-73					
RQUESTENT IS TO BE MODIFIED. STATE WHEN SUCH MODIFICATION SHALL					
EQUIPMENT IS TO BE MODIFIED, STATE WHEN SUCH MODIFICATION SHALL 4-1-73 STATE DATE CONSTRUCTION OF MODIFICATION OF TOWNSHEET HILL OF					